Coal scraps

English Life.

THE COLLIER AT HOME.

It is not very long since a very fearful accident in a Welsh colliery that had been imperfectly ventilated, prompted some comments in Household Words, on the necessity of defining clearly and sharply the responsibility of mine-owners and overseers. While I write this, the public mind is distressed with details of another accident—the most appaliug in its character that mind can conceive—by which more than one hundred and seventy men were consumed in a burning furnace, by the sudden spread of fire over the coal of an English pit. The pit in which this accident occurred is said to have been well ventilated; for the seam of coal worked in it, and in other pits of the same district, was known to be fiery. There had been one previous explosion in this colliery, which had been two years in use; but that killed only two or three persons. In a pit a mile or two distant sunk into the same coal, seventy-three persons were killed ten years ago. In another pit, closely adjoining, seventy-five persons were killed seven years ago. In another pit, five or six miles distant, sunk into the same coal, fifty persons were killed; all these deaths being the results of explosion. Thus, there have been in ten years three hundred and seventy men, in the prime of life, upon whose labor and whose love no one knows how many women and children were dependent for support, destroyed—as we might almost say—upon a single spot of ground. We shall soon be shuddering to look at coal within our grates, when it burns blood-red.

The men working in this coal have not been using safety-lamps, but open candles. It is quite within the power of an owner or an overlooker to command and enforce the use of Davy lamps. It is quite within the power of an owner to cause the gauzes of the Davy lamps to be locked on.—This is often done. Any objection to the lamps on the part of the men has only to be over-ruled by a strict order. If the light they give be insufficient—we have never heard other objections; surely a not very costly increase of the power of the lamp, or a slight expenditure of wit for the overcoming of any other cause of defect, would end that difficulty, and raise the illuminating power to a point beyond that of a dip-candle. It is unjust to make the men responsible for the grave error of habitually working with the naked candle. The poor fellows are not there to teach, but to be taught by their masters.

I do not think they are less teachable than other men—than their charter-masters, for example—or than even the greatest number of owners of the mines in which they work. They accept things as they find them, as all men are apt to do; they do not love change less than their employers. I speak as their friend, because I know them. There is, after all, only half truth in the impression about civilization among miners which the most humorous of our English artists has expressed by showing one of them indignant with his wife, because she has given the milk to the child when she ought to have gi'e'd it to the bull-pup; or two of them thus discoursing of a gentleman who passes:—

"Who's that?"

"A stranger."

"'Eave 'arf a brick at him."

The hundred and seventy men for whom mothers, wives, and children are now mourning at Lundhill, were not of this stamp. The truth about the colliers is not very flattering, but it is worth while that it should be known fairly by a public that is often asked to look on them as answerable for their own calamities.

It has been part of my own fortune in life to spend four years in intimate association with the colliers and colliers' families of a large mining district. Seeing them habitually in their pleasure and their pain, entrusted by them with many of their little secrets, I have had them for my employers, my friends, and my servants. It happens, also, that I have been on equally close terms of acquaintance with the working people of a district purely agricultural, and I am very well convinced that the men working under-ground have more wit than the men who work on the earth's surface. There is the same material of character in both. There are traces of the divine hand of the Creator in us all. Whether we look upward or downward in society, if we will only see each other rightly, we can come to no truer conclusion than that men and women are good fellows in the main. The bond of fellowship clips all society together, and is a law of nature much more powerful than all the laws of all the lands.

A recognition of this truth should lie at the base of all discussion about men. Thus it is possible to blame—and I do, for my own part, blame heavily—the supineness of many pit owners in adopting measures of precaution for the safety of the men. This, however, ari[illegible]u care-[illegible]f life, but from that[illegible]ng to-

The relations between pit-owner and pit-men I have always seen to be very much more cordial than those between a farmer and his laborers.—The pit-men, as being a more independent race, are more likely to strike than the farm laborers; but, they are, as a rule, indefinitely less disposed to be dissatisfied with their employers. When they are sick, they send to them not in vain for wine and little sick-room luxuries; they also confide in them often, when they require help in private trouble. Attending as surgeon at the sick-bed of the ill-paid agricultural laborer, I have found him languishing unaided in his poverty.—The law of settlement has perhaps driven him to lodge far away from his master's farm; but, far or near, sickness has thrown him on the parish for relief, and for comfort he looks out of his own little poverty-stricken circle rarely beyond the clergyman and union surgeon. Among the miners, on the contrary, I have found that, in time of sickness, the master gave more than a good word to the sufferers. The sick funds usually kept them from the parish; and for the supply of any little want that was beyond their means, they trusted safely in the master's liberality. A note to him from the doctor was as good as a bank note for any necessary. His sympathy, too, was direct; and he was not the only friend and helper. I have never seen anywhere so distinctly as among the mines, the rich helping the poor, knowing them all personally, visiting them when sick, and sorry without ostentation or intrusion—looked upon them as helpers and friends without any mean or cringing flattery. From a west country Paradise—where every man in a round frock, stranger or not stranger, bowed to my hat and black coat as to an idol—I went to a middle or north country Pandemonium; where my first day's ride was in company with an unpopular man, (though nobody heaved half a brick at me) yet, certainly, irreverent boys hooted as I passed. Experience, however, proved that the people in the Pandemonium paid respect when it was earned, and only then; whereas, the people in the Paradise were ready with their outward worship whether good will had been earned or not.

They were the same men in each case. I mean to say no more than that, according to my own experience, the collier lives under conditions by which he is developed better, as a man, than the farm laborer. That the better state is much below what ought to be the worst, it will be only too easy to show.

The first advantage that the miner gains over the agricultural laborer is, that he is three times better paid—and then is not too highly paid, considering the peril of his occupation—that his work is constant, and that, if it please him to go from one mining district to another, he can have no difficulty in changing his employer. He has the disadvantage of close underground work, that tempt strongly to the taking of a Monday's as well as a Sunday's holiday in the sun; a complete deprival, during a great part of life, of the humanising influence exerted by the sights and sounds of nature; and therefore a more than ordinary temptation to break the monotony of life with sensual indulgence. In the galleries of a mine, monotony of life and occupation is complete; but there can be little or no monotony to a man laboring above ground under the sun. The aspect of the sky changes incessantly, the winds make every kind of music, birds come and go, trees blossom, bear fruit, and shed their leaves, and the laborer on the earth changes his own work with the changes of the season. Very different is the work of the man always shut up in the same black cavern, dealing the same dull blows with the pick in the same heavy atmosphere, hearing the same come and go of trucks all the year round; the deadly monotony only broken by seeing, every now and then, a companion burnt, or maimed, or killed, in the pursuit of his cheerless vocation.

We cannot wonder, then, if we find men who have not been reasonably well educated, seeking change from such a life in sensual indulgence.—This fault in their character would be more evident and painful than it is, if it were not to a considerable degree checked by the opportunity afforded them of forming families. The women do not labor in the mines. The husbands and sons earn enough for the wants of the house; even the young girls earn money on the pit bank.—Thus the mother is free to stay in the house, to maintain cleanliness, to market, to bake the week's bread of the household, to wash and to mend. The father and sons go home from their work, wash off the coal dirt, and find ready prepared for them a hot meal, both more necessary and more attractive than anything they would be likely to find in the public house. They come home tired; and, after eating, they are lazy.—They go early to bed, because they are obliged to be up at four or five in the morning for their work. Here is obviously a very great natural check upon undue indulgence; and, although in the pit country, public houses are numerous, and much frequented at night, yet, as a rule, the men are not intemperate on working days. On Sundays, those who do not go to church or chapel—the idler worse sort of men and boys—do not know what to do with themselves. They lean against all the posts in the district, and stand at all the corners of the roads, criticising all persons who pass; talking idly to each other, and looking inexpressibly awkward and clumsy. When the public houses open, they slink into them. On Monday, nearly all give way either to simple out-of-door idleness, or to a dull sort of rejoicing in the public house. Thus, although many of them become sottish by fits and starts, the pit-men can by no means be said, as a class, to be given to drunkenness.

But, while there is a home life thus tending to humanize the collier, it has in itself, certain inevitable defects. At eighteen or nineteen he can earn what he will earn at fifty. After he is married, sons, as they grow up, will by their earnings add to his prosperity; as a question of money, therefore, it is as wise for him to marry at nineteen as at nine and twenty. Very early marriages are, for this reason, common; they are founded upon a rough sort of calf love; and form a tie that is maintained, on the whole, pleasantly between husband and wife, but is maintained by no very peculiar community of interest or feeling.—The husband is in the pit all day, and the satisfaction of his animal wants fill the main part of the time at home. This may in part explain why among the colliers, there are very many to whom the marriage bond does not appear so sacred or so necessary as it ought to be. In too many cases, if a collier leaves his wife, and goes upon a journey, it is not a Penelope who stays behind. I speak only, of course, in all that is here said, from my own observation in a single district. I have seen in that district nearly all the colliers' wives and some few of their daughters, working indefatigably in their respective households; famous helpers to the men, and, with the rarest exceptions, kindly treated by them. I have seen very many acts of noble self-devotion on the part of husband on the behalf of wife, or of wife on behalf of husband or of child; but I could not possibly avoid seeing that the ties of family were worn loosely, as well as comfortably, by a large part of the community, and that, in a most material respect, the morality of the district was painfully low. I have seen rough men become as women for a child's sake, and have very seldom seen or heard in the pit country of children that were beaten or ill-used. But, I have seen not unfrequently superfluous children by a sort of indirect murder willfully left to slip into the grave, and I have seen gaps made in a household by bereavement, bitter in the first few days, filled up so speedily, and forgotten, as grief, so completely, as they could not be if the home ties were really strong. It is a sad sight to see in four or five adjoining houses the blinds down and shutters closed, because house fathers and sons have been brought home dead from the pit; but, of the greater number of the mourners, the grief seems to be over very soon after the blinds are up. Doubtless familiarity with sudden death breeds some part of this temper; which may have other causes. We are never right in assigning only one reason to anything in nature; not even to material things; but, to refer to a single cause the workings of anything so complex as the human mind, is unquestionably wrong.

In another respect, I used to observe among the miners, laxity of principle that stopped short of assuming any violent or repulsive form. They yielded a proportion of thieves, bold in a small way, but guilty of nothing like house-robbery or violence upon the roads. To a popular pear tree in my orchard, there was a regular footpath established across a gap in the hedge, made for the purpose of robbing it in its due season. Buried treasure in the shape of potatoes would also be lifted; but, in four years, among a population of more than ten thousand miners, among whom was many a house worth plundering and easy of access, I never heard of one house robbery. From the surgery at the back of my house and detached from it, valuable things could have been taken constantly. It was open and unwatched; but I never lost even the most trifling article of property by direct theft. Of indirect theft, which did not appear theft at all to a dull, moral sense, there was plenty, and it took plenty of forms; but that is not at all peculiar to miners and their wives.

Of brute violence in any form I have seen little or nothing among pit-men. I have walked or ridden hundreds of times at night about the wildest part of the pit country, and have seen [illegible] looking men start from wild looking [illegible] never once entered into my mind that anything to fear; for there was nothing [illegible] know myself to be really safer at mid[illegible] blasted ground occupied by the pit-men [illegible] daylight in a shady lane among a population purely agricultural. Whoever reads the trials at assizes, knows that the agricultural ignorance yields crimes more foul and terrible than the le[illegible]dense ignorance of a community of colliers. The difference depends, not on the men, but on the conditions under which they live.

I have endeavored to represent fairly the main points of a collier's character as it formed by his occupation. The mining population is not by any means so rough as appears in its first aspect to a stranger, and I cannot for a moment admit that it is to be made answerable for any defect whatever in the construction or working of a mine. Like other men, miners have opinions and prejudices; but, in their own calling, they take them from their masters and their overlookers. Masters continue year after year to build cottages without due attention to the wants of health; they know, moreover, that arms and legs are broken by the accidental fall of stones while men descend the shaft; nevertheless, they do not properly face and protect the pit mouth. They know that men are burnt in the pit, and are generous to them, feel a true compassion for them in their suffering; but they do not exert themselves sufficiently to strike at the root of all such accidents; because, as the working of pits has been, so it shall be.—The men who talk about improvements are mere innovators, meaning well and knowing little, persons to be looked upon as the heretics used to be looked upon by orthodox believers who had on their side, as they believed, all the traditions of the church. We must be chary of blaming men for this. Orthodoxy belongs not only to divinity, but to law, to physic, to all callings and all trades. If it makes improvement slow, it perhaps makes degeneration slower. To all obstinacies of custom we are willing to give due respect. All that we care to assert is, that the miners themselves are not the men to whom we must look for an abatement of the frequency of accidents in mines. Nothing can be done with the miner except through the master. If the master come to the opinion that all his men ought, for their own safety, and for the credit of his mine, to work with safety lamps—any practical improvement necessary to the lamps being first duly made—he has only to say so to his manager, explaining clearly why he is of that opinion, and that he has firmly made up his own mind upon it, and such lamps will be used. A master resident on the spot has so much influence that, if he be in earnest, he will himself speak to the charter-masters who are in authority over working companies; or, better still, to all the men in public, and in private to those whom he knows to be more obstinate than their neighbors, or more influential. The men thus prompted would not be slow to see their own advantage; and, in a very short time, they themselves would extinguish any naked candle employed by a refractory companion. It is not by the great accidents that get into the newspapers that a collier is admonished of the risks he is encountering. Every week has its mishap—the peril of the way of life is manifest—is almost daily in some form stated and accepted. It is accepted as a supposed necessity, not, of course, as a welcome incident of labor. When the accident is death by the breaking of a chain or rope, the master or the manager is censured often enough by the colliers for having mended an old rope when he should have furnished a new one. When the accident is death by burns from a stray firing of foul air, no one is blamed, but, let the men once get an efficient safety-lamp fairly among them, and there will be found none readier than they to exclaim against the wrong done to themselves in any accident caused by the use of candles.

COAL-BURNING LOCOMOTIVES.—Numerous abortive attempts have been made during the last ten years, for substituting coal for wood as fuel for locomotives. When it is known that all over Europe coke is used as successfully as wood is here, it is not easy to understand why there should be any difficulty in using anthracite, but practice has taught that there are many. There are now three different plans before the public, and they are all approved by competent engineers. A locomotive on the Baker plan is now building at the Boston Locomotive Works, under the superintendence of Mr. Amory, for the Providence and Fall River Railway Company. The novelty consists in making the flames follow a curved flue, instead of going straight to the chimney. The smoke is thus more thoroughly mixed with air, and consequently better burned. There is also an arrangement to supply the furnace with warm air. It is alleged that the result will be a saving of fifty per cent. The locomotive Irvington, built at Lawrence, Massachusetts, and now at work on the Hudson River Railroad, is the invention of A. F. Smith, Superintendent of that road. This machine weighs 59,000 pounds, the driving-wheels are five feet in diameter, the stroke is 22 inches, the boiler is 49 inches in diameter and 11½ feet long. The barrel proper, extending from the flame-sheet to the smoke-arch, is 7½ feet long and 40 inches in diameter. There are 179 brass tubes, of 2 inches outside diameter and 7½ feet long. The fire-box measures 60 by 32 inches, with a combustion chamber extending four feet into the barrel of the boiler. This chamber is divided by a water leg, extending from the front of the fire-box to within 20 inches of the tube sheet. Around the combustion chamber there are apertures which are opened or closed at pleasure, and by which air can be let in to burn the gases not yet consumed. The consumption of coal on the first trip, between New-York and Poughkeepsie, was 4,200 pounds instead of the usual four cords of wood; that is to say, $13 25 instead of $28. Dimpfel's tubular boiler is intended for any kind of fuel, and it is alleged answers perfectly for coal-burning locomotives. A large machine of this style was built by the Taunton Locomotive Manufacturing Company, and is now drawing express trains over the Erie Railroad, using anthracite alone. The fire-box and the barrel form one chamber, through the whole length of which the smoke passes, escaping into the smoke-box through an opening in the lowest part of the barrel near the smoke-box. The tubes extend out of the barrel over the fire; there they bend upward, and the top of the furnace becomes a tube sheet. With this arrangement the water is inside the tubes and the fire outside between them, in the manner adopted for the boilers of the Collins steamships. The inventor claims to have by this arrangement entirely done away with the burning of the end of the tubes and of the top of the fire box, which is the ordinary consequence of a coal fire in a locomotive built on the usual plan. We do not find in any of the machines mentioned an arrangement either of grate or of coal feeder, or of blast to prevent the coal from melting or from forming clinkers, or from exploding into small particles which fall through the grate. It is much to be regretted that very often a good invention gets a bad name, and its introduction is delayed twenty years, on account of a secondary detail not attended to in due time, which prevents the whole machine from working.

PENNSYLVANIA ANTHRACITE LANDS.

For the Press.]

At a time when so much money is idle, when apitalists look with distrust on most kinds of nvestments, when confidence in man seems lmost to he gone, it may be well to call attenion to our coal lands. Philadelphia owes her mportance and wealth, in a great measure, to he coal of Pennsylvania. Were the mines of cbuylkill, Carhon, and Luzerne not to contriute their products for one year, who can estiate the baneful influence on all kinds of busiess, and the complete revolution which would ecessarily follow, not only in our city, but any parts of the country? These counties ossess within their limits deposits of coal uch as are nowhere else to he found, and hich have already become so much used as o he a growing indispensable necessity to the hole economy of social, business, and comercial life. The coal of Pennsylvania gives er an advantage over other States, and will ake them her tributaries. In the language f a New York journal, "It is from this source he largest and securest fortunes spring that re to be found in this country." This being he case now, in the infancy of the coal trade, hat may not he expected in the future? In reat Britain the first importance is placed pon this article. Her statesmen attriute her mighty power to her coal fields, nd her Parliaments have inquired of the ost eminent geologists of that country, ow long will the supply equal the demand? nd an English writer on this subject says: 'It cannot be necessary to point to the any advantages which we derive from the ossession of our coal mines, the sources of reater riches than ever issued from the ines of Peru, or from the diamond grounds t the base of the Necta Mulla mountains. nd another, "that it is the possession of oal mines that has rendered these kingdoms he mart of the world, as dispensing abroad he richest productions of art and industry," nd. "that the vast importanee of coal to he arts, manufactures, and general prosperity f our country, renders in all its bearings, he trade in that material a subject of deep nterest to all who justly estimate the sources f the greatness, commercial and otherwise, f the United Kingdom."

On this point one paragraph from the *eloquent Hugh Miller:* "Let us mark to how mall a coal field Central England has, for so any years, owed its flourishing trade. Its rea, as I have already had occasion to remark, scarcely equals that of one of our arger Scottish Lakes, and yet how many housand steam engines has it set in motion; ow many railway trains has it propelled cross the country; how many thousand waggon loads of salt has it elaborated from the rine; how many million tons of iron has it urnished, raised to the surface, smelted, and ammered. It has made Birmingham a reat city—the first iron depot of Eu-ope, and filled the country with crowded towns and busy villages; and if one small field has done so much, what may ve not expect from those vast hasins laid lown by Lyell in the geological map of the Jnited States?" Yes, even *our anthracite oal fields* contain more COAL *wealth*, regarding *quality* and quantity, than the whole of Britain; aud for what was this great deposit placed there? Most surely for the benefit of man. It was preparing, doubtless, for his uses in epochs when the earth was covered with vegetables and animals now extinct—before the "waters played hide-and-seek among the hill-tops," or Adam was formed. Let the enterprising, industrious, hard-working emigrants of the British Isles, and of the Continent of Europe—the treasures of a State—inquire of themselves why the Almighty has stored this Union with illimitable wealth—supplied it with such agricultural advantages—given us such fertility of soil—such a variety of production—salubrity of climate, and such vast area? and they cannot but conclude that it was to be occupied and improved by his creatures. If most of them would seek the country, rather than remain about our crowded cities, they would not know of "*the hard times.*"

PENNSYLVANIA

To return. If the coal trade is of such vast importance to England, it must become hereafter, increasingly more so, to our rapidly advancing country. In the language of a late eminent Philadelphian, uttered in 1840, I would ask, "If coal has made Great Britain what she is; if this has given her the power over four hundred millions of men, and supplied the manufacturers which have made us, like the rest of the world, her debtors, why should not we, with at least equal advantages, make it the instrument of our own independence?" In England, the cost of mining is far greater than needs be in the United States. In one place, for instance, a perpendicular shaft a third of a mile, has been sunk to reach a four feet vein of coal; in another, a shaft of eight hundred feet deep, to mine one of half a yard in thickness; and at another place, a seam is worked beneath the ocean, more than half a mile from the shore. Much time is frequently given to open a mine; for example, ten years of continuous labor have been spent on a coal shaft, at a cost of half a million of dollars, or more, to reach a small vein—a striking evidence of confidence in the science of geology.

In France the difficulties of mining are still greater than in England. "The preliminary works are more considerable, and the labor of digging the coal and bringing it to the surface more expensive." Indeed, numerous facts and instances might be adduced to show that mining in Europe is more difficult, dangerous, and expensive, than with us. Our Pennsylvania anthracite is of the purest kind, not equalled by any other. Many of the veins are of great thickness, twenty to thirty feet, and more; free from serious faults, remarkable, in most places, for the small amount of slate uear the surface, and can be mined, whether by drift or shaft, comparatively cheap; and yet our lands, while intrinsically far more valuable than those of Great Britain, can be purchased at one-twentieth the sum asked for theirs. When we consider that only forty years since, the first experiment to use anthracite as a fuel was made in Luzerne county that twenty years ago but little was dug, and that already the production has exceeded seven and a half millions of tons annually, what will the anthracite coal trade of this State not become in the next twenty or even ten years? A common error is too soon to expect a large return from mining. A little reflection will convince any one that, from the nature of the business, no great remunerating result should be looked for the first three or four years. This has been the case with the most profitable collieries. *That* much time, at least, should be ungrudgingly allowed for opening the coal-driving gangways and turning breasts, to make room for a sufficient number of men to quarry and prepare any large amount. Mistakes are often made in selecting proper points for opening, so as to derive all the local advantages for operating, owing, generally, to the want of knowledge and experience in those who have the management.

Mining is both an art and a science, requiring theoretical and practical knowledge; and it does not follow that, because one has been a successful dealer in dry goods or groceries, or an enterprising manufacturer or mechanic, that he is qualified to overlook and direct a large mining operation. Those supervisors are often of more importance in their own estimation than profitable to the stockholders. It would be better to let that be done by an experienced mining engineer. Such are employed in England, and such here could be obtained for far less money than is frequently expected by, and paid for such services to presidents and other officers of companies. Money, however, is realized from mining in much less time in this than in other countries; and when an operation begins to pay it continues to do so, and all mistakes, errors, and unwise expenditures are soon surmounted. Coal should be a cash article. Cash is paid for toll, freight, the wages of the miner, and all current expenses, and the wholesale purchaser should be required to do so. He gets his money down from the consumer, and yet, often suspends and withholds, if not defrauds the coal operator, not only of his profits, but the money advanced to mine and transport the coal.

Worthless debts, in most instances, in unsuccessful cases *have taken the place* of large profits. Many of these drawbacks on the trade should and must be removed, and then no investment can be found so safe for a father to leave his family. Think of the thousands reduced to dependence by the failure of our banks, in our city and country, where not only the stockholders have lost their all, but sometimes the depositors and the holders of the notes have been losers; of depreciated railroad and other stock, and compare such with the permanency and value of a good coal property—a property enhancing in value the more it is worked. Our coal fields are becoming well supplied with railroads and canals, connecting them with growing markets. The Schuylkill and Lehigh regions have several. The Wyoming and Lackawanna have some and will soon have more. The Lackawanna and Bloomsburg Railroad will be completed in a few weeks, and the North Branch Extension Canal may be relied on the next season and after.

An engineer, whose service to the State makes his opinion on such matters decision, lately examined the injury to the horse-race-dam, and said he could repair it, so as to fill the canal with water in two weeks. The unusual floods of the season, so disastrous to the public works of New York, north and west, have swollen the Susquehanna and its tributaries almost without intermission, and have delayed repairs, or swept them off before well secured; but such untoward contingencies are not always to be dreaded. The canal is an excellent one, and will furnish transportation for half a million of tons of coal, or more, annually. The extension of the Lackawanna and Bloomsburg railroad to Lanesboro', to connect with Albany and the Lakes, will doubtless in a short time be made; a railroad along the Susquehanna river also, and a-gravity one from these valleys to New York city, and other roads,—thus opening the great north and west of our country to these coal regions. True, this trade now suffers, like all others, but it cannot but be temporary.

If the thoughts and facts above hastily written are just, (I think they cannot be questioned,) an obvious inference is, that the owners of anthracite coal lands should not willingly part with them. They are increasing in value far more than the interest on cost and the time is not far distant when they will pass as heir-looms from those who then hold them, from generation to generation. Further, capital seeking investment as a perpetuity, could not be placed in better, if so good, property. The area of the anthracite of this State is small, though the deposit *inexhaustible.* (The elder Silliman, of Yale College, speaking of the depth, thickness, and quantity of the coal of the Wyoming or Northern anthracite field, uses these words: "Except as a matter of science, there is no necessity for deciding the question, for the amount of workable coal is altogether *inexhaustible.*") Much of it is in the possession of those who need not, and will not sell, and the most eligible parts of the remainder will soon be, in like manner, secured. Such lands will not become cheaper, and the present pressure has not made them so.

I could here add many cases of large revenues derived by individuals and companies from this anthracite coal trade, such for instance as 20,000, 70,000, and 100,000 dollars a year, paid to freeholders in mine rents; of individual operators making as much; and the large dividends of stock companies, managed with skill and economy—but these are generally well known.

WILLIAM F. ROBERTS, Geologist.

and Consumption—Present and Future Supply—Reading Railroad, its Capacity, &c.

TO THE EDITOR OF THE HERALD.

POTTSVILLE, May 4, 1857.

For some days past I have been here posting myself in relation to the coal business for 1857, and have succeeded in obtaining what I believe to be the actual condition of the trade. In the research I not only discover the evidence of a short supply, but recognize the facility with which the consumer is humbugged; and so long as the good people continue to listen to the stories of the bogus operator in lands, the croakings of the dealer, who has not even money to pay the freight, and the ingenious inventions of the gentlemen of the stock market, so long will they be forced to pay from $1 50 to $2 per ton for the amount that is necessary to their business or comfort. In 1853 the repeal of the duty and the furore in relation to Cumberland, advanced the price from $5 50 to $7 50 per ton, and notwithstanding the Parker Vein and New Creek explosions, you have this year precisely the same results from the Delaware and Lackawana. Last year they promised to the citizens 600,000 tons, and we have yet to learn that they despatched 50,000 tons from their mines. Now they are out with the promise of a million, and, without inquiring into the facts, your citizens believe—at least they say so through their bears—that they will get every ton of it. But as the entire Wilkesbarre region, including the business of all the outlets to the trade, produced last year but 201,000 tons over the previous year, it is likely, nay, it is certain, from the intervening mountain they will not exceed the last year's production more than 50,000 tons.

In 1850, the canals, which now present an average cost of $10,000,000, were enlarged to their present capacity; but as the mining operations were only on a par with the demand of the market, and as it requires not only time and a large expenditure of money, but the labor of at least 200 scientific men, to produce 100,000 tons per annum, you will perceive that the chance is decidedly against an increased supply in 1857. Since 1850 the increase on the Schuylkill canal is precisely 125,774 tons per annum; on the Lehigh 70,824, and on the Delaware and Hudson, including the product of the Pennsylvania Coal Company, the increase was 79,961 tons. This result, while it exhibits the slow or tedious operation at the mines, is not very encouraging to the parties who are looking for an over-stocked market. In the business of the last three years the average tonnage on the Schuylkill canal was 1,037,356; on the Lehigh 1,222,822 tons; and on the Delaware and Hudson 1,045,335 tons. In this condition of the trade, it is therefore certain we can derive no increase from these several sources, and as the last year's derangement served only to check the improvement at the mines, and as a mine producing 50,000 tons per annum cannot be put in full operation under three years' labor, you may say to your readers that the chance for a short supply in 1857 is now a prominent feature in the trade. On the Lehigh Valley road, from the facts as stated, the product must be taken from the canal; and on the Delaware and Lackawana, if they will inquire of their "next door neighbors,"—the Pennsylvania Coal Company—they will learn the fact that at the end of the next seven years they may be in a condition for the transportation of about 500,000 tons. This amount, however, is based upon a double track road, with an entire renewal of the one in operation.

These facts you will find in the history of the past, and as they reveal some curious lessons in relation to the production of coal, I can only say that since the Lehigh Valley road is in a progressive state, and the Reading, from its grades and position, presents an almost unlimited capacity, the stockholders of the several canals would be very great fools to encounter the expense of another enlargement until the railroads had attained their capacity. In the present condition of the Reading the estimated capacity is 4,000,000 of tons; and as a similar condition, under similar expenditure, may be attained on the Lehigh Valley, it will not be worth while to trouble your readers with the facts sustaining the position. Coal, it is now understood, cannot be hauled up hill by locomotive power, nor can it be taken from the bed in which nature has planted it by the wishes or hopes of speculators. In the report of the Reading for 1856 you will see that a train carrying 412 tons is taken to the city and the empty cars returned to the mines for $135 17—equal to $1 56 per mile, and at a cost of 35.2 cents per ton. This fact, with another, that a single engine averages three trips per week, and gives to the consumer 1,236 tons per week, settles the question; and if contrasted with the Delaware and Lackawana, where the distance is 131 miles, and where the loads are limited to 120 tons, with only two trips per week, it will be discovered that the cost per train is $204 34—equal to $1 70 per ton—and the weekly tonnage but 240 tons.

The demand of the market, it is admitted on all hands, is 6,000,000 of tons; and as the product of last year extended to 5,782,476 tons, and all used up, you must send in your orders if you desire to secure your usual comfort. The proportion, therefore, for the Reading will require a shipment of 53,000 tons for the balance of the season.

Our Harrisburg Correspondence.

HARRISBURG, Pa., May 2, 1857.

The Sunbury and Erie Railroad Bill—Change of Name of the Road—Action of the Legislature—Trade of Philadelphia Looming Up—Her Speculative Liberality—City Railroad Cars—Amendments to the State Constitution—Bank Charters.

As I predicted in my last letter, the supplement to Sunbury and Erie Railroad has been reconsidered, and to day passed by a vote of 49 to 43. The discussion on this bill has been an animated one, and every possible argument that could be trumped up, both for and against it, has been brought forward in the debate. The opponents of the bill have succeeded in twice defeating it, but, like a cat, with seven lives, they have as often reconsidered it, and to-day it passed the lower house finally by the above vote.

This bill changes the name of the said railroad to Philadelphia, Sunbury and Erie, and appropriates three millions of the bonds secured by the sale of the main line of the public works, under the act recently passed the House for that purpose. No action has been taken upon this bill in the Senate yet, and it will be hard to tell what the fate of the bill will be in that body.

The completion of this road is an important measure to the city of Philadelphia. It will enable that city to compete with New York for the trade of the northern counties, which has of late been rolling into New York, and develope the vast resources of a number of those counties which are as yet almost a wilderness, as well as open a direct communication by railroad from Philadelphia to the great lakes. No measure has been before the Legislature this winter (the bill for the sale of the main line excepted) in which the people of the northern and eastern portion of the State are more deeply interested, and no measure has called here so large a class of lobbyists; the lobbies have been completely infested with jobbers, contractors and speculators of all sorts, ever since the bill has been under consideration.

The friends of this road now assert, if this act becomes a law, that the entire length of the road will be completed within two years. The erection of this road has been talked of for years, and under their original charter a piece of road here and there has been created; but no extra effort has been made to push it forward. Notwithstanding it is a road that would add largely to the trade and commerce of Philadelphia, yet that city has pursued the same narrow minded course that has been always characteristic of her in measures that would develope the resources of the interior of the State. She has been quietly sitting down until she sees that the enterprise of New York city is reaching forth her great arms and drawing to that city the immense wealth that lies slumbering in the northern counties. Awaking at last to an appreciation of her interest, she is now turning her attention to the completion of this road, which her interest demanded should have been done long ago. If this bill passes the other branch of the Legislature and receives the approval of the Governor there is no doubt but that the road will be completed at an early day, and when once in operation it will be a strong competitor for the trade that passes over the bosom of the great lakes, and carry to the city of Philadelphia an undreamed of commerce.

An act authorizing the construction of passenger railways in a number of the streets in the city of Philadelphia has also passed the House of Representatives, and will pass the Senate at an early day. Again is the Quaker City following the example of the Empire City in procuring a way for its numerous denizens to pass to and from their places of business. This project met with a severe opposition on the part of a portion of the Philadelphia delegation.

The proposed amendments to the State constitution have passed both branches of the Legislature, and will be now submitted to the people at the October election for their rejection or approval. These amendments passed in precisely the same form that they did both branches of the Legislature last winter, and have now only to receive the endorsement of a majority of the voters to become a part and parcel of that instrument. Our constitution requires that all amendments to the constitution shall pass both branches of the Legislature in two successive sessions, and then be submitted to the people, and if approved by them shall then be a portion of the constitution. Those requirements have been gone through with, with the exception of the latter.

There are four amendments to be submitted to the people. The first relates entirely to the contracting of debts and the disbursement of the same. Under this amendment, no State debt whatever shall be created on behalf of the State, with the exception of such as are necessary for the paying of the casual failure in the revenues of the State, to repel invasion, suppress insurrection, defend the State in war, or to redeem the outstanding debts of the Commonwealth. It also provides for the payment of the present State debt by the creation of a sinking fund, which shall be enough to pay the interest accruing on such debt, and annually reduce the principal thereof by a sum not less than two hundred and fifty thousand dollars. Section fifth of the same amendment fixes that the credit of the Commonwealth shall not in any manner be pledged or loaned to any individual company, corporation or association, nor shall the Commonwealth hereafter, become a joint owner or stockholder in any company, association or corporation.

The second amendment refers merely to the divisions of counties; the third to the State representation, and the fourth gives the Legislature power to alter, revoke or amend any charter of incorporation hereafter conferred, under special or general law.

A great anxiety is manifested amongst those who have secured the passage of bank charters as to what course the Governor's will pursue. He is now having quite a feast over them, there being upwards of fifty that have passed. The Governor's independent, non-communicative course on that subject, keeps the friends of the different bills in hot water. Every message from the Governor to both branches of the Legislature is watched with great interest.

that mean, some valuable documents and information. In reference, also, to the best employment of the prisoners, and in connection therewith to the future location of one of the prisons, we have personally visited and examined different situations prepared for such location, as is hereafter mentioned.

From these sources, a considerable mass of facts has been brought together; the result of which, with our conclusions from them, it will now be our aim to present to the legislature, with the utmost conciseness in our power.

To the end that our observations may be more readily referred to, and better understood, they are classed under the following general heads, namely:

1. Of the situation and construction of the two prisons, and their respective advantages and disadvantages in that respect.

2. Of the accounts, expenditures, earnings, and present economy of the two prisons, and the present expense of them to the state.

3. Of the government, rules and discipline of the two prisons, and the comparative efficacy of the respective systems adopted in them.

4. Of the utmost practicable earnings and economy of the state prisons, and herein of the question, whether a state prison can be made to defray all its own expenses of every kind.

5. Of the laws against crimes, considered with reference to prevention, detection, reparation and punishment; of the principles upon which different systems of penal laws operate to protect society, and that none can fully attain that object; of the comparative efficacy of different modes of punishment, and herein of solitary confinement, with and without labor, and with different degrees of privation: and of the actual attainable benefit of the laws against crimes.

6. Of the pardoning power, and its liability to abuse.

7. Whether the New-York prison should be altered or rebuilt on its present site, or a new prison built elsewhere; with estimates of the expense of each.

8. Of the alterations and amendments of the laws respecting the state prisons:—a bill reported.

I. *Concerning the construction of the two prisons.*

First—Of that at Auburn.

This prison was begun in the year 1817, and has cost probably about $300,000. It is constructed upon the plan of a hollow square, enclosed by a wall of 2000 feet in extent, being 500 feet on each side, and, for the most part, 35 feet in height. Within the outer walls, and nearest the eastern front, is a building, the central parts of which are occupied for offices and keepers' apartments, and from which extend two wings to the north and south, for the confinement of the prisoners.

Of the centre building, the basement story contains a kitchen and pantries for the use of the keeper. The first story contains the office, inspectors' room, pantries, and the main hall of entrance to the building. The second story has two parlors, two bed rooms, and a sitting room, over the hall; all of them appropriated to the use of the keeper. The attic story has five finished rooms, at present out of use.

THE BERGEN TUNNEL.

Our readers will doubtless recollect that, in the latter part of the year 1855, the Erie Railroad Company endeavored to obtain the new right of way for their road to the present ferry by private purchase, and before the object for which the land was obtained could be known by the Legislature. The attempt was entirely successful. The land was purchased in the name of the President of the road, Homer Ramsdell, and was immediately transferred to the Long Dock Company at the original cost. The Legislature of New-Jersey, in the Winter of 1855 and 1856, granted unanimously a charter to the Long Dock Company, with liberal power, by which they were authorized to make a tunnel through Bergen Hill, as it would not only be very beneficial to New-York, but be the means of uniting Jersey City and Hoboken together; also to fill in along the Hudson, construct docks and buildings, and make and establish a Railroad Ferry. The Company was immediately organized, and a large amount of stock subscribed, and all necessary arrangements made for going on with the work. The Company called J. H. Malloy, esq., who had charge of the two contracts on the Hudson River Railroad. Many were of the opinion that the tunneling could not be done under six years, and that in the end the Company would be seriously out of pocket. Mr. Malloy, however, informed them that a tunnel could be put through the hill within two years' time, and that he should not have the least hesitancy in undertaking the job. His proposition was immediately accepted, and the contract was drawn up and signed on the 28th of May, 1855. Bonds were also given to the amount of $25,000 for the satisfactory performance of the contract within the time specified. On the 4th of June the Company assembled at the east approach, where an opening speech was made by the President, H. Ramsdell, esq., which was responded to in a happy manner by the Mayor of Hudson City. The next day the work commenced. About 1,000 laborers were hired to sink the shafts, of which there are eight in number, at about an equal distance apart, the tunnel being driven each way. This arrangement divides the distance to be run, so that each gang has to make 250 feet of the length of the tunnel. By the 1st of August the whole eight were in active operation. Their progress per day was about six feet, and by the 10th of December they commenced tunneling. Since that time they have made wonderful progress, averaging seven feet a day. It was thought by Mr. Malloy that when they arrived at the required depth, the rock would be of a softer nature. But it appears that it did not turn out to be so. The rock is of the hardest kind, and known as the trap rock, similar to the Palisades rock. They, however, pushed the work forward until the 17th of last March, when a strike arose for more wages, which led to a fight between the Corkonians and Far-Downers. This delayed the work for about one month, owing to the necessity of putting on green hands. However, since that time everything has gone on well and there is not a doubt but the work will be finished within the time specified. The tunnel is entirely straight, and is 4,311 feet long, exclusive of the rock cutting at the approaches. The excavation is to be 23 feet high and 30 feet wide. Mr. Malloy has now driven about 36,000 lineal feet of heading, and a good portion of the tunnel is completed. The heading is driven along the upper part of the tunnel about 8 feet high and 20 wide. The hill is quite uniform in hight, and is admitted to be about 100 feet above tide-water. In fact, the whole work is urged forward with great energy, day and night.

On Tuesday we called upon the contractor, in Hudson City, and found him diligently at work in his quiet office on Main street. After stating our business, Mr. Malloy invited us to visit the different shafts. On arriving at the west approach we found a gang of twenty-five workmen busily engaged in blasting. Thus far they have penetrated about two hundred feet into the rock, and expect to meet shaft No. 2 in about two weeks. The rock at this end is of a softer nature than at the east approach; therefore they are enabled to make greater headway. Within the past week several pieces have fallen down from overhead, and the workmen are obliged to keep a good lookout. On Saturday last an Irishman named McElroy was instantly killed by the falling of a large piece upon him, crushing him most horribly. He was buried on Sunday. The contractor informed us that he should be obliged to chisel it off smooth, so as to make it safe for travel.

We then proceeded to shaft No. 2, and were lowered down one hundred feet in a tub by means of a stationary engine, placed there for hoisting up the blasted rock. Attached to the engine is a blower, for the purpose of forcing down pure air; otherwise it would be impossible for the men to work, owing to the impurity of the atmosphere. We immediately experienced a change, coming as we did from where the thermometer was up to 89°. We, however, groped our way along with a lighted candle some two hundred feet, to where the workmen were at work drilling, and in the course of fifteen minutes we had the satisfaction of exchanging salutations with the workmen engaged on the shaft No. 3. Shafts Nos. 2 and 3 are the first that have met as yet. The contractor some time ago offered a prize of $50 to whichever gang should meet first. The prize, of course, was awarded to the workmen in shaft No. 2, they having met on Tuesday at 9½. After being in the lower regions for three-quarters of an hour, we placed ourselves in the tub, and were soon raised into daylight. We found the work progressing rapidly at the various other shafts, and then proceeded to the east approach, where all the stone which is taken out of the middle shafts is placed upon cars, and brought to this point and lowered down by an inclined plane and drawn by a locomotive to the Long Dock, and dumped overboard for filling in. The Company own thirty-five acres below high-water mark, which they are now filling up very rapidly. When the docks are completed, they will extend more than 1,000 feet along the river, where there is 28 feet of water, thereby affording facilities to vessels of large class to load and unload. Property in the vicinity which could have been bought, three years ago, for one hundred dollars a lot, cannot be purchased now for a thousand dollars. Doubtless, within three years' time it will all be built up, and become the busiest part of Jersey City. When the cars by the Erie Railroad can reach the river by this route, they will save one mile of distance between the slaughter house and the Duane-street depot. It will also save operating the cars over a rise of 60 feet above tide, beside some 300 feet of curvature, and twenty minutes of time. This will tend to place the Erie Railroad in a better position as respects the freighting business of the West. It opens the line to Jersey City direct, without the possibility of shutting up the freight-traffic in the ice between New-York and Piermont.

As the cells in the north wing, are more than sufficient to lodge the present number of prisoners, the south wing has become comparatively useless. Should it become desirable from any increased number of prisoners, to have more cells, the south wing might (though not without considerable expense) be altered for that purpose; according to one of the plans hereafter mentioned, in respect to the New-York prison. This prison might then hold about 1,100 convicts;—Annexed to this report, is a ground plan marked A. of this prison; on which also is a figure intended to represent more perfectly, the arrangements of the cells in the north wing.

Second—Of the state prison at New-York.

This prison was begun in 1796, and is believed to have cost about $300,000. It is placed within what has now become a compact part of the city of New-York, upon a piece of land containing four acres, exclusive of some additional ground, which has been gained by building a wharf. The shape of the ground, is not exactly rectangular, but somewhat oblique or rhomboidal.

The prison is built upon the general plan of a hollow square; but it is not perfectly such, as the wings are composed of parts, some of which project from 20 to 30 feet beyond the others. There is a centre building of about 59 by 64 feet; to which are attached two wings, extending the one to the north and the other to the south, 37 feet long and 13 feet wide. From these, in a north-westerly direction, there are extended, both from the north and south ends of the wings, three buildings on each side. The first on the south, is 35 by 47 feet, or thereabouts; and the same arrangement is observed on the north, forming in the whole, nine buildings irregularly joined together.

Centre Building. The basement story of this building contains in front, two rooms about 21 feet square, and a hall. These rooms are occupied, one as a kitchen, and the other as a mess-room for the keepers. The rear of this story is about 21 by 59 feet, and is occupied as store rooms for provisions.

First story. The front contains two rooms 21 feet square, and pantries. One of these rooms is occupied as an office, and the other by the keepers. The rear is the keeper's hall, and contains an office where the writing assigned to the convict clerks is performed.

Second story. The front contains two rooms, and a bed-room occupied by the principal keeper; and in the rear are lodging-rooms for the assistant keepers.

South wing—Building No. 1. The basement story contains 5 rooms of 12 by 18 feet; the first story contains 5 rooms of 12 by 18 feet, and the second story the same.

Building No. 2. The basement story contains one large room of 30 feet 6 inches by 51 feet 8 inches, and is occupied as the mess-room for the convicts. The second story contains one large room of like dimensions, occupied as a shoemaker's shop.

Building No. 3. The basement story contains four rooms of 12 by 18 feet; the first and second story each contain the

Building No. 4. The basement story is o ns: the first story contains seven cells, 5 feet 6

North wing—Building No. 1. The basem By 18 feet; the first and second story each con

PARACHUTE FOR MINES.—The method of descending into mines by ladders is very fatiguing, and in consequence baskets attached to a rope are generally used. Should the rope break, the men in the basket are, of course, killed. Many mining engineers have proposed methods of removing this evil, and among the best is the safety cage of Mr. Fourdriner, of England. A Belgian engineer has recently proposed a kind of cage, so that if the rope breaks, its top will immediately expand in a parachute, and let the men down gently. The only objection to this is that parachutes are not to be depended on, as we know from the accidents that have occurred to many æronauts who have attempted to descend in them.—*Scientific American.*

NEW POST OFFICE.—A new post-office has been established at Delanco, Burlington county, N. J., and Micajah Dobbins is appointed postmaster.

10.

Building No. 2. The basement story is 30 feet 6 inches by 50 feet, and is divided into two rooms, and occupied by the female convicts. The remainder of this building is occupied as a chapel, and is about 36 feet 6 inches by 52 feet.

Building No. 3. The basement story contains four rooms 12 by 18 feet; one of them is occupied as the apothecary's shop, and three of them as lodging rooms for the convicts. The hall of this story is used as a kitchen for the hospital. The first story contains four rooms 12 by 18 feet, and they are occupied as the hospital: the second story contains four rooms 12 by 18 feet.

Building No. 4. The basement story is occupied as store and lumber rooms; the first story contains seven cells, 5 feet by 8 feet each.

The wall of the prison encloses about three acres of land. The workshops are disconnected with the wall, and are placed in the yard of the prison. These shops have been built from time to time, as the business of the prison increased, or occasion required; and there is, therefore, neither order nor arrangement observed in their situation or structure. Some are substantial brick buildings, while others are mere sheds of wood; some only one story, and others two stories high. A ground plan of the whole is herewith presented, marked B.

The site of this building is in many respects favorable: being bounded by the Hudson river on the one side, there is afforded as much facility for carrying off the filth of the place, as can be without a fresh-water stream. The water for drink and culinary purposes is good, and may be obtained in abundance, though not with the same ease as at Auburn; as here it must be drawn from wells sunk within the precincts, while there it is brought from a spring by conduits, to the prison yard. The whole of this edifice is illy adapted to the purposes intended; and unless the state will authorise an alteration of the interior, or will erect another upon a more improved plan, we may look in vain for the results so anxiously anticipated by the friends of the penitentiary system.

The interior accommodations for confining more than 600 convicts in this prison, consist of fifty-four rooms of 12 by 18 feet; in each of which there are locked up at night from twelve to fifteen persons. This is a fact upon which we need not enlarge. The ruinous consequences of confining several prisoners in the same room, are now universally understood and deplored. We believe that we do but repeat the common sentiment of all well informed men, when we say, that as long as this measure is necessary, our state prison at New-York can be no other than a college of vice and criminality; an institution where criminals are collected, not for seclusion, but for society; where there must therefore prevail a train of common sentiment, founded upon the sense of common criminality; where vice gives the fashion to opinion, and every tendency to reformation is laughed out of countenance; and where the inexpert are made more vicious, and the vicious are hardened, and all the arts of criminality studied and diffused with most disastrous effect.

II. *Of the accounts, expenditures, earnings, and present economy of the two Prisons, and the present annual expense of them to the state.*

Proceeding in the execution of the duties assigned to us, it was considered to be necessary, in order to ascertain with what degree of economy the prison concerns had been conducted, that we should be informed of all the separate items of expenditure for several years past, the aggregate of which made up the total expense of the prison; that seeing all the separate items of expense, we might be enabled to judge whether any of them might be wholly dispensed with, or others less expensive substituted in their stead.

A WEEK AMONG THE COAL MINES.

Leaving Great Bend on the Erie Railroad, the Delaware, Lackawanna and Western Railroad leads, by a route of less than fifty miles, to the northernmost of the Pennsylvania anthracite coal-fields. The country through which it leads is generally wild; after passing New-Milford, about seven miles from Great Bend, the road follows a narrow valley, in many places almost a gorge or ravine, rocky and densely wooded, until opposite Montrose, and the same general character of country to the Tunkhannock. There we see some fertile valleys and good-looking hill-farms, but, going southward, the country becomes rugged again, and the dividing ridge south of the Tunkhannock Valley is crossed at the summit by a tunnel of, I should think, 1,000 or 1,500 feet in length. The hills grow higher as the Lackawanna Valley is approached, and steep, precipitous bluffs bound the deep gorge called Legget's Gap, through which the railroad enters this great coal-basin. This is, in fact, a part of the Wyoming Valley—the Lackawanna running through it for half its length, till, near Pittston, the Susquehanna breaks into it through its bounding mountain-ridge, and receives the minor stream, with which it flows on past the celebrated fields of Wyoming, until it again bursts through the barrier-hill to the west, by the Nanticoke Gap, and leaves the valley. The entire length of the basin, including the Lackawanna Valley and its prolongation by Wyoming, is some sixty miles, and its breadth perhaps an average of four or five—its surface (except the river meadows near Wyoming) gently undulating or hilly, and the mountain ranges which border it being long, straight ridges, running N. E. and S. W. with the general direction of the Appalachian ranges. The examinations of the brothers Rogers, in the Pennsylvania Geological Survey, lead us to believe that the rocks of this region, with their intervening coal strata, originally level in position, were crumpled and folded into their present form of alternate basins and ridges by the same tremendous convulsions or slow changes which crowded up the Alleghany ranges; and that, since then, the action of diluvial and atmospheric agencies have worn away the upper or coal-bearing strata on most of the high and exposed points, leavidg them only in the troughs or depressions sheltered between the mountain-ranges. Of the three such basins in Eastern Pennsylvania, the Wyoming coal-field is the most northern and the largest. From side to side it is filled with the coal-measures—a series of slate and sandstone strata here some 700 feet thick, and having about eight layers of coal from four to fourteen feet in thickness, interstratified among them. The Carbondale mines lie in the upper part of the valley; lower down, near where the railroad enters through Legget's Gap, is Scranton, a busy town, which shows the suddenness of its growth in the stumps which still remain in the streets, and the free use of capital in the large and substantial buildings spread around. The mines are not yet very extensively worked just here, but will yield immense quantities of coal when the railroad facilities for transportation are complete. The increase of value in farms has been very great, in consequence of the speculation in coal-lands. Farmers who bought many years since, at $10 per acre, are now offered from $250 to $500. Large coal estates are owned by the railroad and iron companies, which employ about 2,000 hands—the latter having extensive furnaces and rolling-mills. At the furnaces, I recognized the familiar volitic iron ore of Oneida County, and the limestone of the same region—the latter being used as a flux, and the former to mix with the ore from the vicinity of the works. The engine used to blow the furnaces is a gigantic structure—one of the largest, if not the largest, in the country, costing $55,000, and working up to 1,200 to 1,500 horse-power. At the foundation of the furnaces, a layer of good coal, six or eight feet thick, is seen, lying exposed like a stratum of limestone in a quarry.

From Scranton I reached Wilkesbarre by a ride of eighteen miles in a coach—the first nine miles over a hilly road through the undulating Lackawanna Valley, and the last nine along the Susquehanna. In the Lackawanna Valley, coal-works were being erected here and there, and lines of rails laid down to connect the mines with the main railroad, when finished. At Pittston, where we reached the Susquehanna, are the extensive mines of the Pennsylvania Coal Company, whose coal goes over the mountain by a series of inclined planes to Honesdale, and thence by the Delaware and Hudson Canal. From Pittston to Wilkesbarre (names of ante-revolutionary origin and association) the road is through the celebrated Valley of Wyoming, a basin perhaps four miles wide, half of rich bottom lands or flats, and half of undulating land, bounded by straight, ridgy mountains 800 to 1,200 feet high. The eastern range is all forest, the western has its slopes partly cultivated, but the valley itself is thoroughly fertile and beautiful, though this season the farmer's hopes had been partly blasted by the ruin of the wheat crop by the fly or "weevil." Many acres of it were left uncut as worthless. About three miles below Pittston, on the western flat, is seen the monument raised to commemorate the disastrous battle of 1778—an obelisk of gray masonry. I was sorry to find so little romance remaining about this spot so famous in story and song. A circus was performing at Wilkesbarre, and a more rough, drunken and profane crew than that which was congregated "on Susquehanna's side, fair Wyoming," I never saw. Probably this was a bad representation of the population of the place; but its general aspect, though substantial, did not compare in neatness and order with the better towns of New-England and New-York. Halleck's poem was far more truthful than Campbell's, which was purely imaginative, and without adherence to truth in its historic as well as its scenic features. Now, the influx of a fresh population of coal-miners, boatmen and speculators, mingled with the old Yankee and German elements, will make the spot more prosaic than ever, and it will eventually be only a larger Mauch Chunk or Pottsville.

All the valley east of the river is full of coal, in some places mined by galleries running into the river-bank, just above high water, where all the capital employed is in a sledge and a pair of mules to draw out the coal and dump it into a barge; but it is generally mined from perpendicular shafts of 100 to 200 feet deep, from which galleries run out along the coal-strata. The Baltimore mine is the most extensive, and, by the kindness of Mr. Gray, the Superintendent, I was shown through it. The stratum of coal worked is 25 to 30 feet thick, with only a few thin seams of slate dividing it, and its removal has left galleries, halls and chambers of cyclopean proportions, and more than Egyptian darkness, such as one might dream of better than imagine while waking. We were more than an hour in walking through them. The slate roof is almost as smooth as a "hard-finished" ceiling, and slopes at an angle of sometimes 20 degrees, being the declivity which all the strata have, from the mountain toward the valley. The galleries have lines of rails run through them, and on each side, as we passed, were constant openings into cross-halls or galleries, some sloping downward, some upward, in which the lamps in the workmen's caps moved about like will-o'-the-wisps as the men were picking and breaking the coal. Every few minutes came the report of a blast in some remote gallery, followed instantly by the crash of the loosened masses, and, altogether, the place reminded us of the very chambers of the Pit itself, except that it was cool and comfortable. Few remains of plants are noticed here or at Scranton, and those seen were far less distinct and beautiful than I had received from Carbondale, which, being jet-black in every leaf, and on a brown or reddish slate, formed specimens as perfect and beautiful as those of an herbarium. Mr. Gray pointed out, as we came to the mouth of the mine, a single round and upright tree trunk standing in the coal, a remaining witness to the vegetable origin of this immense mass of fossil fuel.

From Wilkesbarre, we took a coach for the Catawissa Railroad, passing over the eastern mountain. For part of the way, our road accompanied the railway track over which the coal is hauled to the Lehigh, at Whitehaven. The inclined planes are like that once in use on the Albany and Schenectady Road, but, instead of a rope, the cars were drawn up by flat straps or ribbons of iron, like the leather belting used to drive machinery in mills; but they were composed of three or four separate straps lying side by side, each one perhaps six inches wide and one-eighth of an inch in thickness. This contrivance would seem to insure safety.

We passed, part way up the hill, the conglomerate rock which underlies all the coal, here tilted up at a high angle against the mountain side; and saw under it, in the cliffs and cuttings along the road, the thick mass of red shale which lies beneath. After a two-mile walk up the ascent, we were repaid by a magnificent view of the whole Wyoming Valley, its inclosing

mountains and beautiful river; but on remounting the coach, our road led through very different scenery. A poor and stony soil supported a scrubby forest of pitch pine and small oak, with a thick undergrowth of weeds and shrubs; among them were conspicuous the sweet fern or Comptonia, with its graceful foliage and aromatic odor, the sassafras, and the fruit-laden bear-berry. Three or four kinds of gay yellow flowers were in abundance and in full blossom, and gave a gleam of beauty to this desolate tract, for eighteen miles continued with the same sterile and monotonous character. It was over this same forbidding region that the settlers driven from Wyoming made their way. One of our passegers, a man of some sixty years, was of a family resident in the valley at that period, and told us several local legends of that disastrous day. His grandfather and great-grandfather were slain in the action, his father-in-law was born in the woods the night after, and one of his aunts (Frances Slocum) carried away, an infant, a few years before, was adopted among the Indians of Western New-York, whore she lived to old age. When in advanced life, she was sought out hy a hrother, who identified her hy a scar on her hand, made hy himself accidentally, with an ax, when hoth were young children; but she refused to accompany him to civilized life, preferring to remain with her adopted people.

Dining at Drum's Tavern, passing the fertile and cultivated Conyngham Valley, and ascending the long forest-covered ridge of Buck Mountain, we rolled on through the same piny country which we saw in the morning; until we noticed the conglomerate rock again appearing hy the road, aud drove into the little village of Hazleton, while the screech of the locomotive and the sight of the tall, black, barn-like huildings, with their usual timber-slopes and frames, warned us of our entrance upon a second coal-field. Not far heyond was Jeansville, another mining settlement, with rows of uniform dirty tenant-houses and unfenced streets full of pigs, geese, dirty children, and slatternly women. Among the straggling pines loomed up the huge coal-work with the usual steam-puffs arising from its chimney. In another mile we came to a huge hrick hotel and boarding-houses, most unlike the other villages in its substantial appearance, hut silent and seeming hardly occupied, the seat of a German mining association, which was said to have spent large sums and obtained only an unproductive property.

Going on over a half-made and unsafe road, we came to a lonely station on the Catawissa Railroad, called Summit. Just north of it the road passes through a long tunnel cut through the white and massive conglomerate rock, and we watched its black mouth for half an hour, until the down-train emerged from it and stopped for us. We were thence whirled rapidly southward along a descending grade scarped into the hill-side, and affording fine views of the wooded valley, until the appearance of the track, ballasted with coal-rubbish, indicated our approach to another coal-field. Soon the conglomerate strata appeared tilted up in the hill-side; a hundred yards heyond was a coalwork, then another, and in another minute we were in the Village of Tamaqua, in the Pottsville coal-hasin.

Tamaqua and Pottsville lie in a narrow valley, hemmed in hy the steep ridge of the sharp mountain on the south and a corresponding range on the north. Through gaps in the former the streams escape to form the Schuylkill, and tho railroads to join the Reading Railroad to Philadelphia. This long, narrow valley is a coal-hasin—the coal strata tilted up as steep as the sides of a trough on either slope, hut lying in a long, canoe-like valley from south-west to north-east. Through this hollow we drove seven miles to Summit Hill. Tho road led over a rough tract covered with woods, across clear streams, the trout of which have heen killed hy the drainage from the coal-mines, and past laurel swamps. The hollow bears the name of Panther Creek Valley, and is, at its upper part, full of coal-workings, marked by the universal tall chimneys, black huildings, and long mounds of coal-rubbish looking like pieces of huge railroad embankments. At the head of the valley rises Summit Hill, where the coal strata are upheaved into a sort of arch liko a roof, and quarried in the open air. The hill was crowned with huge mounds of debris from the mines, thrown off in form like great hastions, and giving it, against the sky, the appearance of a fortified place. Gin-poles and scaffolding stood on them, and, every minute, cars ran out to the hrink and tipped over new contributions of coal, ruhhish and stone to the piles. The village is a single street, close by the spot where the coal is bent over into what geologists call an "anticlinal axis," or like the ridge of a roof. At this point the hill was "scalped," as the miners expressed it; the covering of earth and stone being taken off, and the coal layers, fifty feet in thickness, quarried in a huge pit. It is now in great part removed, but the mass may still be seen, crushed and crumpled up like a squeezed handkerchief by the tremendous force which uplifted it, and here doubled it over in a sharp ridge, as one would hend a piece of pasteboard. On the right it plunges down heneath the covering rocky strata with a dip steep as the mountain-side, into the Panther Creek Valley. In this hollow are now the chief workings—the tunnels heing driven into the hills at their hases, until they reach the coal, then worked upward along the seams of coal, which thus comes down hill easily to the openings of the mines. Here it comes into the automaton hands of machinery, which handle it almost without the intervention of human labor until it lands at the yards in Philadelphia. Machinery raises it into the upper part of the huildings, steam-power cracks it hetween iron-toothed cylinders, and sifts and sorts it in coarse screens, nnd its own weight drops it into open cars below. These run, hy descending grades, to a common center of all the tracks, at the foot of an inclined plaue, up which steam-power hanls them to the summit. Their gravity takes them in charge again, and away they run nine miles down an even grade to Mauch Chunk on the Lehigh, where, a pin being knocked out, the car-hottom drops, and the coal is discharged into a harge or car, which deposits its cargo of solid heat in the Philadelphia yards.

The heavy iron chains and hooks by which the cars are attached to the wire rope which draws them up the inclined plane, are returned to the hase of the plane is a curious contrivance. Beside the track is built a railing, like a fence, but leaning or inclining a foot or two from the perpendicular, or away from the track. On its top is nailed a light iron rail, and on this rail is set a grooved pulley, with a stont iron hook attached. The heavy chains are hung on this hook, dangling on the lower or hack side of the railing, and let go. The whole, weighing 80 or 100 pounds, glides down with a velocity increasing, until, in its lower course, it flies past like a cannon-ball, and strikes against a hank or hulkhead hnilt to receive it, with a force which no common ohstacle could withstand. This contrivance, at first christened a "telegraph," was called hy some workmen the "flicker," aud this terse and descriptive name it still retains. It is a dangerous affair, and several lives have heen lost by persons incautiously getting into its way.

Accidents not unfrequently happen by the hreaking of the wire ropes by which the loaded cars are drawn up the planes, and the rails are therefore made with breaks at short intervals, which do not check an ascending wheel, hut throw off any car descending; so that the mischief is limited to the upset and wreck of two or three cars hefore their downward speed has become great, and trains at the foot of the plane are not exposed to he smashed hy others coming down with the impetus gained in 300 feet of descent.

An ingenious arrangement, called a "switch-back railroad," returns the empty cars to the bottom of the valley and the mines. They are pushed off, and run hy their own weight, ohecked by hrakes, down a grade of 200 feet per mile along the mountain-side, nntil they reach a point where it is desirable to change the direction and run hackward to a lower place. Here their velocity is checked hy coming to a steep upward inclination, np which they run for perhaps a hundred yards, then stop, and begin to run backward. As they come to the point where they hegan to ascend, a self-acting switch turns them off upon another track, on which they run for perhaps half a mile, when they meet another check and reversed movement; and a succession of such zigzags carries them safely to the hottom, where they are refilled and started on a new journey up the planes.

To follow on the coal, in its progress from the top of Summit Hill to the Lehigh Canal, we mounted an open truck with an Irishman for driver and hrakeman, and set off down the "gravitation railroad" for Mauch Chunk, nine miles distant and 900 feet below us. We ran fifteen or twenty miles an hour, along a steep mountain side, with a deep valley partly cleared and cultivated below; the road was quite crooked, and as we rattled and bounced along on our board-seat, we had a decided feeling of insecurity. At one

point, a cow stood just on the track before us, and, not being quite certain of the power of our brake to check our speed, we were confident of a catastrophe, but she stepped leisurely off just as we came up to her. We raced on, until roofs and chimneys began to appear below, and soon stopped at about 200 feet above the Lehigh and village of Mauch Chunk, which names is Indian for "Bear Hollow." The town is crowded between the Lehigh and the hills, and built partly along the shore, and partly up a tributary valley, its ground-plat resembling the letter T. The mountains rise sharply and steeply all around, covered with a forest, to a hight of eight or ten hundred feet; the town seems as if set in a crack in the earth, through which the river, a black, brawling stream, winds and twists like a serpent. No coal is found within the Mauch Chunk Valley, but it is merely a point of shipment. The coal railroad terminates, as I have said, 200 feet above the river, whence the cars are let down a steep inclined plane to the bank.

In returning to Mauch Chunk, the same ingenious application of the power of steam and gravitation, inclined planes and long descents, is made. The cars are hauled up a steep grade of 2,700 feet in length and about 600 in perpendicular hight, to a projecting hill called Mount Pisgah, from which we looked down upon town, river, railroad and canal, lying in their deep gorge, and surrounded by a crooked wilderness of mountains. We could trace the course of the valley through the ridges, southward, till it passed into a more open country, where yellow grain fields gleamed in the sun; beyond this ran the straight ridge of the Blue Mountains, with one deep gap cut down through them, where the Lehigh finds its way through to join the Delaware.

From this pinnacle our car (this time a very neat one, cushioned and covered) ran, by its weight, perhaps twelve miles an hour, along a slightly descending grade, following the same mountain-side by which we came, through these woods of oak and chestnut. It was the very perfection of locomotion—our car running as if by the mere exertion of our will, winding in long curves among trees and underwood, with occasionally a glimpse of the deep valley below, while any undesirable rate of speed was checked by a slight application of the brake. When within a mile of Summit Hill, we had descended to a level so far below it that another inclined plane was necessary to draw us up about 400 feet, to a point from which we rolled along by an easy grade to the village. At these places safety-cars are attached behind the coal or passenger-cars, with arms, or rather legs, projecting backward, so arranged that, on any reversal of the motion of the car, they drop and catch in the earth, or in a toothed rail which is laid along the track.

On returning to Tamaqua, we visited some old coal-excavations in the Sharp Mountain. The strata here are tilted up on edge, so that the outcropping coal seams were quarried perpendicularly between walls of slate rock, that on the south having been prior to the upheaval the floor of the coal seam, and that on the north its roof. In each the remains of vegetables were abundant, especially in the floor of the coal, where the compressed stems of sigillariæ and lepidodendra, the impressions of those roots of coal plants known as stigmariæ, and prints of long grass-like leaves almost filled the black slate. They were, however, too frail and indistinct to make good cabinet specimens.

Our return northward was by the Catawissa Railroad, well known to Philadelphians, but little to New-Yorkers. It was an excellent road, through a wild and rough range of country, passing through several tunnels, along hillsides far above the villages, round sudden curves, over high trestle-work bridges, spanning streams or dry ravines, and offering a strong contrast to the level, monotonous and well-cultivated route of the New-York Central. I never saw more beautiful rural scenery than that on the Susquehanna, near Danville, or on the West Branch, between Milton and Williamsport, possessing the beauty of a surface gently undulating, and bounded by ridgy wooded hills, with fertility of soil, and a river of large volume, yet clear, and alternating from long still reaches to rapids and rippling shoals.

From Williamsport northward, we had a new and rough road, following up the valley of the Lycoming Creek. The valley soon became hemmed in by forest-covered hills, which grew higher as we went on, till we were racing through a tortuous gorge in the main Alleghany range, the peaks and ridges rising, I should think, 1,500 or 2,000 feet, covered with dense timber, and the cultivated valley only one or two hundred yards wide. We ran on and on, sweeping round the feet of the mountain in paths as devious as the track of a skater, crossing and recrossing the rapidly-dwindling stream, which preserved a nearly uniform descent, nowhere broken by falls. This feature of the country—the piercing of a mountain range by valleys so nearly level that their streams flow with a gradual and easy current—was new to me. Before leaving the last tributary of the Lycoming, we had passed the main mountain range, yet the hills were high and steep when we attained its remotest source and passed over to where the streams flow eastward to the North Branch of the Susquehanna, and the country remained rough and hilly, but with an improving agricultural aspect, until we passed the State line and were descending into the valley of the Chemung at Elmira.

August, 1855. L.

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tainty upon the question, whether the pro-
hereby increased, in due proportion to the
or for out-door customers. Neither was it
the articles applied to the use of the con-
prices which left exaggerated earnings to
what they would have earned, had they been
, at the usual prices. Every thing, however,
except by those who act as servants for each
airing the prison, is credited to their earn-

In the accounts for the year ending Octo-
ent B, of the appendix, the sum of $2,283.34,
charged to their support, for washing and
.31, for cutting and making convicts clothes,

materials bought for the purpose of being
se of the convicts, are in the first and only
f support and clothing. They are not inter-
ctured and sold, for account of the prison.
o manufacture them into clothing and other
s; another section, to make and mend the
ding, scrubbing, whitewashing, &c.; for all
als,) the accounts of the prison are neither

k prison, the earnings of the convicts and
d by nearly all the labor done by the con-
f the prison; while those from Auburn only
nd paid into the prison office, or charged on
mers. Although it may make no difference
ate, or in the charge which either of them
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the other, deduced from the aggregate of
d number of convicts, the different modes
rder to arrive at any thing like a correct

Between the two modes of keeping the accounts, we give the preference to that of Auburn, as being less complex, and liable to fewer mistakes and per-

People talk about this being a matter-of-fact age. In some sense we suppose it is so, and yet was there ever an age in which the dreams of romance were so marvelously fulfilled? It was thought much in the old time for an enchantress like Medea to order a pair of dragons to be put to and then to mount her chariot and post away over land and sea to her design. A pair of griffins were not bad substitutes for coach-horses in the eyes of the medieval romancers, and the hippogriff was a very tolerable "saddle beast," as the horse auctioneers say, and made very good time through the air when bestrode by Rogero or Astolpho. But all these legends did but typify what prophets and kings like Euripides and Ariosto desired to see, but died without the sight, and which is all vulgar commonplace to us. For if we wish to transport ourselves from one end of the continent to the other, we have nothing to do but to put ourselves into a magic car, to which an enchanted horse is harnessed, more strangely wonderful than dragon or griffin, though breathing fire and smoke like them, which whisks us away through the air with an utter scorn of the obstacles of time and space, of rivers or of mountains, and sets us down at our journey's end, for all the world as if it had done nothing out of the common course. And we are so used to this miracle of every day that we scarcely stop to think what an astonishment it really is.

The modern dragon, however, which we have tamed and broken to draw our chariots for us, resembles its ill-reputed prototype of former times in another particular beside those of flying through the air and breathing fire and smoke. It has, like that ill-regulated monster, a prodigious appetite, and consumes very great quantities of food. Fortunately, it does not devour men and flocks (though it occasionally kills and maims them in its savage sport), but is strictly Vegetarian in its dietetic habits. It is not true of our dragon, as it was of the Dragon of Wantley, that

> "Houses and Churches
> Were to him but geese and turkeys;"

but groves and forests he devours up with eager and indiscriminate hunger. A tall pine, "fit for "the mast of some huge admiral," is but a breakfast to him, and Birnam Wood would be crunched up and swallowed in the course of half a dozen dinners. The devastation which the maw of these hungry though useful monsters is making among our woods and forests, the way in which they are laying bare the hill-sides and banishing shade from the face of the earth, has awakened very reasonable concern for the consequences. The marketing for one of them cannot be done at anything like the figure of former times, which circumstance, by increasing the cost of his keep, necessarily makes his labor more expensive and less extensively useful—beside the fearful looking for of the time when he may give up his fiery ghost from mere inanition and the lack of food, and reduce us to the ancient slowness of mere steeds of flesh and blood.

Happily, however, there is a resource to which we may recur, and will, as soon as necessity drives us to it, as she is now doing with inexorable urgency. After the fiery dragon has browsed his fill upon our forest pines, and cropped them down level with the earth, there yet remain stored away in her recesses inexhaustible quantities of vegetable food, grasses and ferns, and trees already cooked by fires which went out millions of years ago, easy of mastication and digestion, and of power to recruit his strength and plume afresh the wings of flame on which he flies upon his path. To dismount from our allegory before it gets as "headstrong" as those Mrs. Malaprop tells us are to be found "on the banks of the Nile," and throws us over its head, we would say in plain pedestrian prose, that the crisis in our locomotive affairs is at hand, and some substitute is to be provided for the fuel now furnished to our railways by the dwindling forests, the scarcity and the price of which are already felt in the growing rates of traveling, that prime necessary of life to all free and independent Americans. It is fast growing out of the category of relative economies, and taking to itself the stern form and pressure of inexorable necessity, this question of what is to breathe life and speed into our locomotives when the forests fail us. And it is happily a question of no difficult solution, and one to which the enterprise and inventive genius of our countrymen have been industriously, and, so far as can be judged of by experiments under unfavorable conditions successfully applied.

Wood being the cheapest kind of fuel twenty-five years ago when our railways first began to stretch their arms across the continent, the locomotives have, almost without exception, been adapted to that agent of combustion. But as it becomes scarce and dear in the insufficient proportion the growth of the forests bears to the swift demands of locomotion, some other combustible must be provided to take its place. Coal, of course, presents itself, with not so much a request as a demand to be taken into our service, and, equally of course, it will compel us to employ its agency as soon as it can prove that it is the cheaper and better servant. Corporations are, to a proverb, slow to move in the direction of innovation on established habits, and, perhaps, it is owing to the circumstance that our iron pathways are under the control of those law-created entities which have no bodies to be kicked and no souls to be d——d, that the comparative merits of wood and coal have not been thoroughly tested and ascertained long ago. But the matter has been recently taken up in good earnest, and a day very soon to arrive will see a locomotive, built expressly to try the economy and energy of coal as compared with wood, according to what seems to be the truest principles of science, actually running the race for the prize of combined speed and cheapness. It is building at the Boston Locomotive Works for the Providence and Fall River Railway Companies, and the higher bidder of the two is to be its possessor, should the success of the engine be such as it is confidently expected that it will be.

The extravagance which has grown out of the plenty which has blessed this country, and which is so observable in our wasteful use of food, drink and fuel, has also marked the measure in which the rations of the iron horse are meted out. The greatest care has been taken to get the greatest possible amount of work out of him, while the equally important consideration of the smallest possible amount of provender on which he will do that work, has been almost totally neglected. As the ratio of population to production, by increasing the price of the necessaries of life, is compelling us to more rigid rules of domestic economy, so the increasing prices of the necessaries of locomotive life are compelling new schemes of thrift in that direction. The point being conceded, which we presume no one will dispute, that wood must give place to coal on our Railways sooner or later, it is surely only a wise forecast which begins before absolute want compels to see whether this last may not be profitably adopted at once, and, if so, in what most profitable way. The locomotive now nearly completed at the Boston works is distinguished from its predecessors, as we understand it, by the incorporation into it of the adjustment invented and patented by Mr. Henry F. Baker, and known as the "Baker Improvement," and of an ancillary invention of Mr. Jonathan Amory, the agent of the Company which holds the Baker patent. By the first of these improvements, the gases generated by the combus-

tion of the coal, instead of being suffered to escape at once through the flues, are seized *in transitu* and made to do manifold service by being sent through certain curved bridges, the effect of which on the gaseous current is greatly to increase the power of the combustion. By the last, a current of heated air is introduced at the curves behind the ignition, so as to make the improvement of Mr. Baker peculiarly applicable to coal-burning locomotives.

The engine now building, and nearly completed, of which we have spoken, can hardly be regarded as an experiment. It is only the combination of these improvements in a locomotive expressly built to receive them under proper conditions, after they had been satisfactorily tested under very unfavorable circumstances. The Baker Improvement was first applied a year or two ago to an old condemned engine on the Lowell and Worcester Railway, as experiments in medicine used to be tried on criminals left for execution—a kind of *experimentum in corpore vili*. With all the disadvantages incident to such a trial, it was estimated that the saving of fuel was about 40 per cent over the old wood furnaces. A second experiment was made under better auspices upon the Boston and Worcester Railway with a better engine, built of course for wood, but with these improvements introduced as well as could be done under the circumstances. More than twenty trips were made with this imperfect machine, with coal superior in quality to what would be used were it employed as a regular working locomotive. The trial was regarded as signally successful, and the result was stated by Mr. Hale, a most cautious though experienced authority, in *The Boston Daily Advertiser*, as indicating an economy in fuel of about 62 per cent over the old wood furnaces. According to the analysis of *The Advertiser*, the average cost for wood of running freight trains, in 1855, was about 41 cents, while the average cost of coal on these experimental trips with coal used with these improvements, was but about 15 cents a mile! Such a result as this, one would think, must settle the question, even if the new engine should effect no greater saving than was made by this imperfect application of its principles. But it is reasonable to expect that it will effect a still more material percentage of saving. In which case a locomotive revolution must be at hand.

The object aimed at in these adjustments of Mr. Baker and Mr. Amory is to approximate to the solution of the problem—how much work a pound of coal can be made to do. By the consumption of the gases and the smoke which results from the successful application of these improvements, the comfort of traveling is as materially promoted as are the profits of the shareholders. The smoke and soot nuisance which is the bane of Summer railway traveling, here finds its proper antidote. The principles of the curve and of the hot-air feed are applicable as well to stationary steam-engines as to locomotives, and they have been fully tested and profitably adopted in this country and in England. In England the curves were applied, under Mr. Amory's direction, to the East London Water Works; and after a fair trial, Mr. Wicksteed, the Engineer of the Works, admitted that they would effect a saving of from 30 to 40 per cent over ordinary furnaces, and this report of Mr. Wicksteed was adopted by the Board of Admiralty. As near as we can understand the matter, those improvements in the structure of locomotives, and the consequent substitution of coal for wood, which must follow, if the economy be anything like that indicated by these experiments, are destined to work great and beneficial changes in all the relations of railway life. They should make traveling cheaper, and at the same time increase the profits of the shareholders. Whatever tends to bring peace out of the natural warfare between the buyer and the seller of swift locomotion—which shall reconcile the ancient grudge between ticket-buyers and dividend-receivers—is good, only good, and that continually. We trust that we shall soon have to announce the squaring of this circle, the discovery of this longitude, the dawning of this Golden Age upon the Iron world in which Directors, and Shareholders, and Travelers, live and move and have their being.

Our European Correspondent.—This week we had the pleasure of grasping the hand of William J. Palmer, Esq., our European Mining Correspondent, whose letters to the *Miners' Journal*, have attracted much attention; elicited general commendation, and have been widely copied by the press. It may surprise those who have perused those letters, to learn that he is a gentleman of but 21 years of age, and that the letters which appeared for a series of months in the *Journal* were commenced when he was in his 19th year. The vigor embraced in their composition; the clearness and conciseness of his statements, and the evidences of matured judgement, are wonderful, when we consider the youth of our correspondent. Mr. Palmer is on a tour of inspection—his first we believe—of the Anthracite Coal Regions of Pennsylvania. Nothing daunts him—difficulties he always overcomes. He pedestrianates to reach a point, where there is no conveyance, or when time would be consumed in waiting for one. Such a spirit must make its mark. We hope Mr. Palmer will jot down some of his observations while in this Region, for publication in the *Journal*. Our readers we know, would be as delighted to hear from him at home, as they were gratified with his letters from Europe.

EUROPEAN CORRESPONDENCE.

Letter No. 27.

THE COLLIERIES AND IRON WORKS OF SOUTH WALES.

Anthracite District.

At Merthyr, we leave the limits of the Bituminous Coalfield, and proceeding westward, reach, in the Vale of Neath, the first of the *Anthracite* Iron Works of South Wales.

These are situated near the village of Glyn Neath, in the vicinity of the Railroad to Merthyr, and on a Canal—15 miles long—which connects them with the Bristol Channel at Port Talbot.—They are known as the *Abernant Works*, and belong, together with the adjacent mines, to the "Neath Abbey" Iron Company.

The Furnaces.

The Abernant furnaces are three in number.—They are all worked by the *hot-blast*. In one, the so-called "waste gases" are utilized. Two of these furnaces are comparatively old, having been built ten years. They are of small capacity, and produce only from 4½ to 5 tons of iron, in a day of twelve hours—or about 70 tons per week.—The third furnace has been built within two years, and is much larger, yielding 105 tons per week.

The total capacity of the three furnaces is 245 Welch tons per week; a yield which has been almost equalled by that of a single furnace in the Anthracite District of Pennsylvania.

Though these furnaces are called "Anthracite Furnaces," it must not be supposed that stone-coal is their sole fuel. From some cause, it has been found necessary to mix *Bituminous Coke*, brought from a distance, with the raw product of the surrounding mines.

In the smaller furnaces, this mixture is in the proportion, (by bulk) of 1 of Coke to 4 of Anthracite,—alternating with 1 to 3. In the large furnace, the proportion is increased, and consists of equal quantities of Coke and Anthracite. The larger the Furnace, the greater the admixture of Coke required. The cause of this, I suppose, is the relief afforded by the Coke, to the dead weight of uninflammable Anthracite, lying in the furnace.

The Coke used is expensive, as it has to be manufactured, and brought from a distance of 10 or 12 miles, by Canal. It is made at Peel on the southern outcrop of the Coal basin, where the same veins of Coal are Bituminous, which here, on the north crop, are Anthracite.

Very few of the furnaces in Glamorganshire, it seems, have yet learned the Pennsylvania art of making Iron, with *Anthracite*, and with that alone. I say "Pennsylvania art"—for, though the merit of having first succeeded in the application of this Coal to Iron furnaces, belongs to *Crane*, a Welchman, yet to judge from the present condition of the Iron manufacture in the Anthracite districts of the respective countries, Wales and Pennsylvania, any disinterested observer must pronounce the pupils in advance of their teachers.

The *Ore* used in the Abernant Furnaces, is a nearly equal mixture of red Ore, imported from Lancashire, and used raw, with the calcined Welch ironstone from the same mines as the Anthracite. There are ten stoves used in heating the blast for these three furnaces; and an engine of 200 horse power, to drive it. The minerals are raised to the level of the furnaces by a small engine.

About 550 tons of Anthracite Coal, weekly, are consumed at these works—besides the coke. The pig-iron produced, is sold to the different large Companies throughout the country—the "Ystalifera," the "Cyfarthfa" &c. This is the case with the iron made at most of the smaller works in the Anthracite District. It is conveyed to these mills, by Railroad or Canal.

The character of the Anthracite used, is that of a hard, dense, brilliant Coal, with metallic lustre, irregular fracture, and occasional whitish specks, which shew it to be a "White Ash." Why the furnaces cannot use it, without recourse to Coke, it is difficult to say. Some eight years ago, Coal alone was used, when the yield did not exceed 3½ tons of Iron, in a day of twelve hours, or less than 50 tons per week. Since the mixture of Coke has been introduced—in the proportions named above—the yield has been much increased.

The Colliery.

The Colliery attached to these Works, and owned together with the Furnaces, by the Neath Abbey Company, who have other extensive mines and Iron works along the Vale of Neath, is known as "Pwllferon," and has been opened 33 years.

It produces about 225 tons of Anthracite Coal daily. Of this production, 125 tons, intended for sale, for lime burning, hop-drying, household, and various purposes, are sent by Canal, to the Ocean near Swansea. The remaining 100 tons go, also by canal, 1¼ miles, to the Iron Furnaces. For the latter, only the large, picked Coal is used.

The Coal sent to market is divided into "through" or unassorted, "small," and "large sorted"—bringing the following rates at Shipping port:

"Through" Coal, - -	$2 00 per ton.
"Small" Coal, - - -	1 50 " "
"Large sorted" - -	$2 50 to 2 75 " "

The *sorting* is done in each "stall" or room of the mine, by the collier himself, as he falls the Coal. I have seen no *breaker* in use, in any part of the Welch Anthracite Region.

Cost of Mining.

The actual cost of producing this Anthracite, in boats on the Canal, directly in front of the mine, is	84 cts per ton.
Add freight to Shipping Port—14 miles, at 2 cts., - - -	28 " " "
Cost at Port, - -	$1 12 " " "

If sold at $2, the Company makes a profit of 88 cts per ton.

Three veins of Coal are worked at Pwllferon, by slope and level. They are 4 feet, 12 feet and 9 feet thick respectively. One level serves to bring out the Coal from all these mines to the surface; a slope intersecting the different beds, at a certain distance within.

The colliers are paid by the *cubic yard* mined. A cubic yard of the Coal weighs from 17 to 18 Welch cwt. of 120 lbs. each—or about 2100 lbs.—a little less than one of our tons. This, it will be observed, is much lighter than the Anthracite of Pennsylvania, which ranges from 2200 to 2300 lbs. and will probably average 2500 lbs. per cubic yard. The *Bituminous* Coals also, of England, seem to be lighter than those of America. For instance, the *Wigan cannel* weighs 2151 lbs., and the *Newcastle Coal*, 2143 lbs,—while the *Pittsburg*, a very similar Coal to the latter, weighs 2314 lbs. to the cubic yard.

The wages, paid the collier, in the different seams of Coal, at Pwllferon, are as follows:

In the 4 ft. vein, - -	30 cts. per cubic yard.
" 12 " - -	21 " "
" 9 " - - -	18½ " "

Most is paid in the 4 ft. vein, on account of its small size; least in the 9 ft. vein, because it is the softest Coal to work.

A collier mines 20 tons per week, in the small veins, and nearly 30 tons in the larger veins.—He will therefore earn about $6 per week, or one dollar per day.

The Iron-miners, working in the same pits, do not obtain quite as high wages. The Ore, or balls, occur directly over the seams of Coal, and are, at Pwllferon, about 8 inches thick. The cost of the Ore, delivered on the Canal side, immediately in front of the "level", is about $2 50 per ton, to the proprietors. The miners are paid $2 per ton; and as they dig 10 or 12 tons per month, their wages are equivalent to rather less than $5 per week.

The underground Bailiff at this mine, to whose kindness I am indebted for the above and other information, has a brother-in-law in America, who writes him that his wages as a collier, near Pottsville, are £2 per week. One pound seems to be nearer the average rate, in this part of England.

Transportation.

The "Vale of Neath" Canal conveys the surplus production of this colliery to market. The distance to the Shipping port, on the Bristol Channel, is 14 miles.

The charges are as follows:

For Coal, - - -	2 cts. per ton per mile.
For Iron Ore, - -	1 ct. " " " "
For Iron Rails, - -	6 cts. " " " " "

The Coal boats carry 25 tons each.

This Canal is 70 *years old*, and has proved a very profitable investment to the stockholders.—Some twenty years ago, it paid dividends of 20 per cent.; at that time, more minerals were carried over it than now,—and all the Iron manufactured at the great *Hirwain Works*, sought this avenue to market. Though it is still remunerative, the star of its fortunes is no longer in the ascendant. The construction of rival improvements (the Railroad from Merthyr to Swansea, and the Canal in Taff Vale) has had the usual effect. Indeed, at this day, all Canals but ship Canals, may be considered as institutions of the past.

Royalties.

The royalties or rents paid for Coal in England, are, as is well known, much less than in America. There, the proprietor of the ground very generally realizes the major portion of the profits, leaving the poor operator a very small margin. In England, the *operator* seems to be, to a certain extent, rewarded for his energy and risk in the business.

The royalty paid at Pwllferon Colliery, is as follows:

For Coal, - - - - - 15 cts. per ton.
For Iron Ore, - - - - - 16 " " "

This property is leased of a Mr. Williams, whose mineral lands include 3 or 4000 acres in in the vicinity.

The Neath Abbey Company have, in this neighborhood, a lease of another property, advantageously situated near the outcrop of the veins, which they work in 7 levels and 3 patches or open quarries. For this their royalty is as follows:

Whether any Coal is worked out or not, $1000 per annum. For every ton, after a quantity, whose royalty is equivalent to $1000, twenty-four cents.

As a further instance of the royalty in this section of Wales, the Aberdare Company, who have lately leased, on the mountain opposite Pwllferon, a mineral tract of 2000 acres, may be mentioned. The ground contains 5 or 6 veins of Ironstone, and 8 or 10 beds of Coal, in a vertical stretch of 250 yards. The seams of Coal range in thickness from 2 feet to 18 feet, and while the lower beds are Anthracite, the upper ones are more or less *Bituminous*. The rent paid for the property is as follows:

Whether the mines are worked or not,—$2500 per annum; for every ton of Coal and Ironstone, after a quantity, whose rent is $2500, 12 cents for the Coal, and 18 cents for the Ironstone. There is also a nominal surface rent.

This is regarded as a cheap rent, but the ground being faulty, the proprietor will be put to considerable expense, in developing the subterranean treasures. W. J. P.

Marl, Coal, &c.—*The Forethought of Nature.*

A few years since, while some laborers, in digging a well near our Atlantic sea coast, threw out a sort of greenish sand, mixed with bits of sea-shells, which strangely puzzled them. The next year the owner of the farm was surprised to find that wherever his green dirt had been washed by the rains, the vegetation was unusually rich. Such was the first discovery of marl, a fertilizer which has already regenerated whole counties of New Jersey, and which, when it comes into more extensive use, will make thousands of exhausted fields here in the East to rival the rich bottom lands of the West.

Not less accidental was the discovery of coal. Just when our great cities began to experience scarcity of wood for fires, just when the astonishing national advances of this century commenced demanding an exhaustless supply of fuel for manufactures, chance revealed, high up among the stony and barren mountains of Maryland, Pennsylvania and Virginia, anthracite and bituminous coal. At the present day, millions of acres which otherwise would be unproductive, yield up their fossil wood to warm our parlors, cook our dinners, drive our steamboats, propel our locomotives, and turn our cotton mills.

We owe both marl and coal to the provident forethought of nature countless years ago. For marl is but the decayed remains of marine animals, and derives its fertilizing properties chiefly from the lime which forms a principal ingredient of shells. Far back in some remote geological era, untold centuries before man had been created, the waves of a shallow sea washed the localities where we now dig up our marl, depositing there, precisely as the ocean does in similar places now, the shells and dead bodies of tiny marine animals. Year by year, generation by generation, age by age, these deposits went on. At last, some change in the shore, such as the opening or shutting of an inlet, the closing up of a river, or the sudden denudation of a bank, stopped the accumulation; the deposits ceased; sand or other soil began to cover them; in time they disappeared from sight; trees began to grow above them; new and strange land animals roved through these woods; man finally came upon the scene. But thousands of years passed, and the red Indian had long given way to the White American before these marine deposits were brought to light and used to fertilize our fields as marl.—Nature was patient and could wait. She could foresee and was content. Before man was created she laid up in her store-houses under ground the manure with which he was to raise his bread when a dense population and exhausted soils should make corn difficult to get.

And so with coal. In another remote geological epoch, also before man trod the earth, vast pine trees covered the globe, growing rankly everywhere as reeds in a jungle. Age by age they germinated, shot upwards, shed their cones, lived out their centuries, died and fell. Age by age others grew in their places, and in turn perished and fell, till they lay piled, one above another, like grass which the mower has cut. Then came a different geological epoch. The pine forests became swamps, the swamps bogs, the bogs were succeeded by solid earth; and all this while, nature, in her secret alembic under ground, was converting the submerged trees into coal. The carboniferous era, which we have described had for its chief purpose the providing for civilized man. Millions of years before man being lived upon this globe, nature, not only of his coming but of his future wants, made ready for his wants.

Let us follow out this thought and furnish illustrations. We might show how, now cedar forests are becoming scarce, rails and shingles are made from pine wood, dug out of swamps, where the trees were buried them thousands of years ago. We might demonstrate that nature, long ages since, began to manufacture diamonds, iron ore, gold, a thousand things expressly for man, and is manufacturing them still. But we have said enough. Great and beneficent art thou, oh, nature.

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al stores, as
contract.

$4,018	91
3,208	92
4,587	69
3,174	91
2,673	86
2,429	00
1,599	96
1823 | 12,187	28

It will be seen by an examination of the f
material reduction has been effected in the co
ment; and particularly during the period in wl
the management of the affairs of the prison. V
of the expense appearing in this table, or the
are greater than would naturally result from v
it may not be necessary to enquire. But as t
per head, founded upon the annual gross disb
follows, that some other expense must have be

We have also been furnished with a staten
spectors, commencing at the date of the first t
prison at New-York, and ending the first day
which appears to be, to show that the affairs of
improved under the management of the presen
alluded to, is herewith presented, marked D.

III. *Of the government, rules and discipline of the two prisons, and the efficacy of the respective systems adopted in them.*

From the description already given of the Au
seen, that it admits of the confinement of nearly 600 c
cell or room. In the actual practice of that institu
fined singly at night, but silence is strictly requ
At an early hour in the morning, the cells are u
carrying his night tub and supper dish, walk in
their keepers, and after cleaning the vessels bro
then parade before their respective work-shops
begin their labor. At meal times, they parade in like manner at the sounding of the bell, before their shops, and march in files, with a regulated step, to the table, where each prisoner has a stated place. When all are arranged before their places, they sit down at a signal, eat in silence, and as soon as those on

The Money Market.

We give below another communication in reference to the Reading Railroad, the coal trade, and the favor shown the middle men in the trade, by the Company, to the alleged injury of the coal producer:—

"JULY 6, 1857.—The Ledger of this morning copies some very just remarks from the Miner's Journal in refereoce to the coal trade of Schuylkill county, and with direct reference to the Reading Railroad, sustaining the middle or moneyd interest, through whose hands pass, of necessity, all coal shipped over the Reading road for transhipment.

"I would ask, is it wise for the stockholders to sustain this interest, so antagonistic to the interests of the producer, who is the true and only supporter of the road? Why should they be left without any alternative but sell to the *go-between shaver*, who has *now*, at *this time*, dragged down to the *verge of wholesale bankruptcy* a large number of hard-working and industrious producers, who add so largely to our State wealth?

"It is well known that the Reading road under former management, was completely under the control of the Walnut street influence; that private arrangements, in the shape of draw-backs, were allowed to a much greater extent than that made known to the public. This, to the credit of the present management, has, it is believed, been broken up. Now let the good work go on, and one-half the profit that accrues to the middle-man would satisfy the miner for the additional trouble of selling his coal to the consumer or small distributer.

"I would again ask, is it wise for the Reading to continue its present enormous charges for transporting coal to Richmond? Is it not the means of rapidly opening up competing regions, that will, in a short time, be in a position that will compel the Reading to come down to even lower rates than would now be necessary? (Her tonnage is now 100,000 tons behind.) The canal is ahead, and more trade offering than she can take. Were boats and cars more plenty, she could double her business. She has her own shipper at Schuylkill Haven, who will ship for all comers, without forcing them to go to the blood sucking middleman. All cannot ship by canal, as the canal has not capacity sufficient. If you look at the men who have, for a series of years, shipped by canal, and those who shipped by railroad, you will find they make a very different sort of note—not a bad criterion of their success.

"In connection with these remarks, it may not be out of place to call attention to an article in the Herald of this day, commenting on the sale of the Pennsylvania State works for one third of its cost, which, with good show of reason, it asserts is more than the value of works built as it and others were; and I think the Reading may be safely classed amongst the most extravagant the country can point to, and yet the Reading wants to pay a dividend and sustain its market value by charging prices ruinous to the shipping interest. It may not yet be too late for the Reading to take a step back and get into the right track; there are many roads and coal fields yet unopened that the speculator has his eye on, that could not tempt his gold, if the Reading would put her charges at, say $1 per ton to 1st of May, $1 20 to 1st of August, and $1 40 for balance of year. This scale would insure steady work all the year round, for the road as well as the miner; and, in consequence of steady work, the miner could produce his coal at a much lower cost; his workmen, having steady work every day, could work for less pay and he better off. The trade would then cover the year, as parties would not put off laying in their stock until the season would be so near a close that the producer would be at the mercy of the workman, and the consumer at the mercy of the middle-man and large distributer, who would be the only parties in a position to gain by the crowding of business into the last three or four months of the year.

"The Allentown road, now under contract, must and will direct a large amount of trade from your city, and New York must become the grand focus for Pennsylvania coal, if something is not done to break up the present system of middlemen and high charges."

CARBON.

The Money Market.

The following communication contains some expressions and sentiments in which we do not wholly concur, but as the subject is one of some importance, we have concluded to let our correspondent have his say in his own way. It is only through discussion and interchange of sentiment that the truth of disputed points can be reached. We therefore yield space to the following:

"JULY 9, 1857.—In the money article of the Ledger, this morning, I notice a communication from 'Carbon,' upon the subject of the coal trade of Schuylkill county, and the shipping at Port Richmond. It is the second article on the same subject from the same source.

"Being myself interested in Schuylkill county, I have for some time past been a close observer of, and inquirer into, the state of the coal trade. There have been facilities furnished me for communication with the miner, the middle man or shipper, and the Eastern dealer. These opportunities I have improved; and having, to back them, a long acquaintance with the Schuylkill coal and its carriers, I think I have arrived at a more just conclusion than your correspondent, 'Carbon,' whose communication, in some part, seemed to be dictated more by a desire to injure one class of the trade, than to enlighten the community as to the real cause of a falling off, which should now command the attention of every business man, viz: the decline of the Schuylkill coal trade.

"In the first place, a few brief facts will be sufficient to correct the false impressions which might be made by 'Carbon's' article on the minds of those uninformed on the subject.

"The 'middle interest' does *not* influence the Reading Railroad Co. Proof—The unreasonably high rate of tolls which the shipper, not the miner, has to pay.

The middle interest does *not* monopolize the Richmond wharves. Proof—There have been for the greater part of this season, two wharves remaining idle, which the R. R. Co. would gladly have given to any responsible parties, miners or middle men.

"It has become very much the fashion of late years, with some people who ought to know, and and a great many who *do* know better, to visit upon the heads of the 'middle interest,' all the opprobrium and blame which should justly fall upon the Reading Railroad Co.

"Even the thoughtless men among the small miners, who depend for their market upon the 'middle interest,' and who have had opportunities (if not from their own experience, from their observations of the experience of others) of seeing the fallacy of any arrangement of shipping their own coal from Richmond. Even some of these join the hue and cry; following the direction of that very unsafe and badly magnetized compass which guides the course of the Miners' Journal. The cry has been sounded until they who really *know* better almost believe it themselves.

"But my intention in writing this is *not* to defend the 'middle interest,' which is an institution I am entirely opposed to wherever it can be avoided. My belief is, founded on knowledge and observation, that at Port Richmond it is a necessary institution, and is unjustly stigmatized by 'Carbon' as a 'blood sucker.'

"My intention *is* to show where the blame actually belongs. To ask cool, unprejudiced, clear-headed men, men of forethought, to investigate this subject, and to unite in preventing a policy from being followed out on the part of the Reading Railroad Company, which can not be expressed by any milder word than infamous.

"To do this let us stamp some facts, and make some comparisons.

"Schuylkill county is the largest and most available coal field of the country.

"Her largest carrier is the Reading Railroad Company. This Railroad Company, according to their own report, 'carries over it a larger amount of tonnage than any other existing road, and at less expense.'

"Having these natural advantages of position, and an apparantly inexhaustible supply of coal, with the additional advantage of the first start among coal railroads to tide-water, the way to commercial prosperity for its miners and to the possession of a generally flourishing business community seemed fair and open. In fact, it is difficult to imagine a policy unwise and reckless enough to have counteracted these advantages.

"But the Reading Railroad Co have contrived to discover, and discovering, have adopted a policy which has caused ruin and bankruptcy in Schuylkill county, which has forced middle men to sell, as they have done this year under living prices, and which, in turn, has forced miners to sell their coal for less than the cost of production, which has placed the Schuylkill coal field in the worst position of all competitors, and the only reason she has not been ruined entirely, is from the incapacity of other regions to supply the market; this incapacity will not last long, let but the Reading Railroad Co. keep up her system of inordinate rates of toll as heretofore, and the end will soon come. It is this system which has opened other regions, and caused the building of other outlets; and this system, followed up but a short time longer, will open those regions to the full extent of the market. Then, where is Schuylkill county? Where the coal trade of Philadelphia? The readers of the Ledger will be spared the infliction of coal articles, and the Port Wardens fraternise with Othello.

"This infamous policy is well shown at present. While the carriers from other regions have put down their rates to a reasonably low figure, the Reading Railroad Co., which boasts in her reports that she is able to carry coal much more cheaply than they, fixes her toll rates so high that it is impossible for those who send by her to enter into the competition and live. This company professes to charge at present the same rates of toll with the canal, which rates have been agreed to to prevent competition. Why, every man who is at all informed upon the subject, knows that at this present time, shippers and miners who send by canal are making fair profits, at the same prices which are ruining those who send by railroad. This is not owing to any intervention of middle men at Richmond; the miners who ship their own coal there, are in the same condition.

"There can be no doubt in the mind of any unprejudiced observer, but that, in accordance with the selfish, self-aggrandizing policy, which has heretofore characterized them, the Reading Railroad Co., without regard to the interests of others, is making a desperate effort this year to make again an enormous dividend. Should they succeed in this, and continue in their previous policy, it will be the last blow for Schuylkill county. The canal cannot accommodate all of us, and we will bid you *Farewell*.

"The Auburn and Allentown road will come, (the impolitic course of the Reading Railroad Co will invite the building of it, as it has helped all competing routes heretofore,) but it will come too late for most of us. If there were any possibility of ceding us to New York, we might in time become resuscitated; as it is, I fear the only satisfaction left us will be the gratification of observing the mortification of the Reading Railroad Co., when she finds out, too late, that she has killed the goose which lays her golden eggs.

SCHUYLKILL COUNTY."

the main cause of the order and decorum thus observed, is, that in all matters of discipline, there is but one head or principal. The inspectors of this prison, with a laudable zeal for the improvement of its government, have dispensed with the right to direct in this particular, given them by the present state prison law, and have accordingly resigned to the principal keeper, Mr. Lynds, the discretionary power of directing and controlling the discipline and punishment of the convicts, and the conduct, deportment and duty of the assistant keepers. This measure of the inspectors is both wise and judicious, and has produced throughout the establishment the most happy results; and the gentleman in whom this confidence is placed, is in every respect worthy of it; for he is a man eminently qualified for the station he occupies; possesses more than common talents and firmness as a disciplinarian; appears to devote his whole mind to the duties of his office, and has a taste for order, neatness and regularity, seldom surpassed.

Those persons who are confined to the cells, are supplied with all the necessaries of life, but none of its luxuries; enjoy a free circulation of pure air; a full ration of food, and the use of the bible. Several of the prisoners whom we examined, showed some food remaining after their meals, which were more plentiful than they wished. It is the opinion of Mr. Lynds, the keeper, that a prisoner in solitary confinement is made to suffer as much punishment by solitude alone, without the aid of darkness, chains, or short rations, as the human constitution ought generally to bear. But in this prison, few or no convicts are sent to the cells, except those who are sentenced to be kept there by the judgment of the court.

Of the government, &c. of the New-York prison.

Having many remarks to make, which are less in commendation of this institution, than we could have hoped and wished, we think it due to the present and former officers and inspectors, to preface our observations with a statement of qualifying and mitigating circumstances, under which we wish them to be received.

It is most important to observe, that the New-York prison was one of the first establishments of the kind, in America. It was an experiment; but an experiment prompted by a noble sentiment of humanity; and being conducted by men, whose minds were ardently engaged on the side of benevolence, there is the less reason of reproach, if they erred from that cause.

And if the principles on which such an institution ought to be conducted, were then unknown, the proper manner of constructing the prison itself, was as much so. It had never then occurred to any one that the very form and arrangement of a prison, enter vitally into the essence of the system. Hence they only thought of building the New-York prison, so as to be capacious and strong; and they were entirely ignorant of those arrangements which are now known to be essential to discipline, and the want of which has been one great cause of the failure thus far, of the state prison system.

But there was another cause of that failure, the proper examination of which, would lead us farther into reasonings and speculations of a general nature, than would be fitting in an official report. We allude, however, to the peculiar state of public opinion upon the subject of crimes, criminals and punishments, which has prevailed, for the greater part of the time, since that prison was established. During that period, there seems to have existed, in this and other countries, an almost universal sentiment of partial regard to criminals of all sorts, and to sturdy beggars; and generally in favor of all who get their living by inflicting distresses, and imposing burdens, in breach of the laws, upon the rest of mankind. The radical error of this opinion, lay in the assumption of the principle, practically at least, if not avowedly, that men who commit crimes, are

[For the Public Ledger.]

Mining in the Coal Regions.

PROVIDENCE, LUZERNE Co., Pa

MESSRS. EDITORS:—The destruction by fire of a third coal breaker in this vicinity, within a few months, leads me to ask a space in your valuable paper I think you will not grudge for the coal trade. My intention is to prove that the mode of winning coal in this State, as regards the machinery, &c., is not to be compared, as respects economy of outlay or first cost of repairs to uphold it, of portability, as the works become distant from it, and as to risk of fire, to the mode we may term old.

Although the iron ore is brought from points near 300 miles apart, for making pig iron and casting here, pig is made at $14 per ton, or as cheaply as in Staffordshire, the iron county of England; and when we consider that there is no need for fire nearer a shaft or breaker than the steam engine boilers and that a few tons of castings, with some wall, will give a Landing or Breaker Engine, is it not perfect madness to place ship loads of timber erections, huddled together, as at the site of the last fire—the Union Works—here? The three shafts also so close and under the mass of timber, that its remains on fire narrowly prevented the men being got from the mines.

I come now to that which I have formerly mooted in print, and which, as it would deck the bills of machinery makers one-half, and do away with numberless other bills, they must be expected to set their faces against.

Nesmith's steam-hammer has shown that high pressure steam is so controllable that the egg can be broken in the cup and the latter saved. Will any one say then that a steam cylinder may not be in the top of a shaft, directly over the pump, to drain a mine? It was so thirty years ago at the Walbottle Colliery, Newcastle, the steam passing to a tank, at 5 lbs. pressure per inch, supplied a low pressure engine to raise the coal. I gave the idea to a Pottsville paper some years ago, and at the Union Works there is an attempt at it, but instead of a steam valve of about an inch diameter, ample to give steam at high pressure, as quickly as a pump should ever go, their valve has about sixty times that area.

The draining of the mine being provided for by such an engine, having nothing about it to take fire, and as an *extra* ten-horse power in such engine would not in cost exceed $500, or a few shillings per day, in working charges, this extra power, pumping 24 hours, at 150 feet depth of shaft, shall lift water sufficient to raise, by hydraulic or balance, 500 tons of coal, in about half the hours any rotary engine will do it. I saw a balance raising 1000 tons daily—the speed as a stone let fall—one, two, three or four cars at a time. I had them at the several collieries and iron works I set on in two counties of Wales, in many forms, for shafts and slopes.

I hold the mode of uniting the pumping and "winding" up the coal of this country, where slopes and shafts are of "any depth," to be miserably bad, as compared to that of two centuries past, by the beam pumping engine and "iron jack," (about the size of a raft cabin) or frame "whimsey," which our carpenter and smith had $100 to remove to a new shaft, done in two weeks, although it would raise from three shafts, 100 tons each, daily, of the depth of 300 feet each.

It is this sort of knowledge, "Greek" to presidents of companies of the cities, and hateful to those who dare only follow what they see, because they have seen little or nothing, which makes me, after having *won* more seams of coal and ironstone, and erected more iron works than *all* the managers and their helpers on the Lackawanna put together, and which I have plenty of persons here to prove—a terror to steam managers; and the failures in prospect will show what *has been shown* of city companies, invariably, in the coal and iron trades of Britain.

A canal or railway charter is unavoidably a sort of monopoly to create a competition, for their traffic would destroy both. The coal companies who produce for the railroad companies do not, though they have the honor of being "in the coal trade," "sit at table," but they provide the feast. Their average price of about a dollar per ton, is about *half* the average price at the mines in England, yet there (it is supposed) the coal is obtained by "pauper labor." The *rent* is about half what is paid on the Lehigh, etc. The newest works in Wales, where the coal and iron stone are got by levels into the mountain, were coal twelve cents per ton, iron stone eight, in the same levels. The enormous depths of shafts in England increase the cost of the coal very little, after the winning is effected, and I doubt whether *half* the so-called winnings in this State, have, together, as much coal day, as the one of Pemberton's Sunderland, about 14 miles "run" by 7 cropward, 98 square miles, that mine 1800 feet deep.

At a work here, (now stopped by water) they planked the shaft of only 150 feet deep, to keep out the water, on the mode of the deep mines of England, not aware that the first "beak" of the strata at so small depth, must let down the water. This shaft is in a valley of deep sand not better to deal with than a lake of water. Just such a site as *knowledge* would avoid, and the depth of coal, they set to work just that which should *remain*, to keep the surface water from the body.

I have said pig iron is made here as cheaply as in England, with coal and ore together, and "pauper labor" to boot; but a Massachusetts manufacturer has lately written from England that there is a good deal of "poetry" in the idea of pauper labor in England. Should it be your pleasure to insert this, I will go into the reasons for the smiths and public of the States having to pay from 8 to 14 cents per lb. for *agricultural* bar or malleable iron—in England only from 4 to 6 cents per lb.—and having had, as "recreation," for twenty-five years, the "pattern farm" of a lord of the treasury, for feeding 300 miners and horses at works, cultivated on the system, or course of crop, turnips, barley, clover, wheat, peas and *tares*, the latter cut *green*, by which all vegetated seeds of the trash of the course became food or manure,—a system which gave to the *drifting* sand of Sherwood forest, the wealthiest tenantry in England, and as a barrel of flour is here $10, an old cabbage lately 18 cents, not worth one, to the thousands of cattle fatting on them in England; beef 20 cents, etc; and as the farmers seem to rely more on "famine prices" than good crops, despite the lectures of Mr Greeley. As this course is to the mass of agricultural books, what "Fear God and keep his Commandments" is to the Scriptures. "The conclusion of the whole matter," I shall be happy to tender an article occasionally on agriculture, as connected with feeding at works and manufactures. If, with flour at over double the price of the West, with every one going or coming from there, nobody staying "to mind their own business" at home, railways do not pay, it is surely time to look to Atlantic State farming.

Hunger knows no law. Population is fast increasing. Chopping land becomes a degradation, and cities "on paper" for the West, by the hundred to give *another* "America" I premise not to ramble so far, by far, in my next, and remain,

Yours, respectfully. THOS. BUTLER

[Correspondence of the Public Ledger.]

Mining in Pennsylvania.

TAMAQUA, July 6, 1857.

EDITORS OF THE PUBLIC LEDGER, PHILADA; Gentlemen—Having noticed in your paper of the 4th instant, a letter from Thomas Butler, Esq., of Luzerne county, Pa., in reference to machinery now in operation in the coal fields of Pennsylvania, I would ask the privilege, through your columns, of calling his attention to some of the more modern constructions of winding and pumping machinery now in successful operation in the anthracite coal fields of Pennsylvania, believing, if he was willing to spare the time to visit and inspect the herementioned machinery, it would be a means of changing the erroneous idea he now entertains that our mining machinery is a century behind that of Great Britain, to that of one century ahead of any machinery that has ever been built in the known world for a similar purpose of like capacity. In the winding machinery I would here call his attention to the Ivens & Allent patent direct rope drums, built by Carter & Allen of Tamaqua Pa., for Wm. Donaldson & Son's mammoth colliery, near here; they have been in operation for nearly one year. The principle of this machinery is, that instead of shifting the rope to prevent unnecessary wear upon it, as it comes on to the drum—as now used in England—we ship the drum gradually to accommodate the rope, thereby effecting a saving of some 500 per cent. in the use of round wire ropes or chains. I might here say that parties, of Dudley, England, are now negotiating with me for drawings, together with the privilege of allowing them to build this machinery in that country for the shafts and inclined planes.

For a model pumping engine we would direct his attention to the Buckville Colliery, worked by Jones & Cole, and though the steam valve has more than one square inch of area, the engine, nevertheless, works admirably, and gives the greatest possible satisfaction. It works directly on to the pump rods, at an angle of 43 degrees. By this Mr. B. will see we "American mechanics" do not wait to have mechanics of other countries show us how to do things, but oftener show them. I would here remark that the cost of these machines is less than others of same capacity for a similar purpose; and for the economy of working as well as preservation of the rope in winding, they have no superior, neither in this or any other country.

Should be pleased to see Mr. B. at any time at Tamaqua Iron Works, and have him examine our models, drawings, and references. In the draughting department of this establishment he will find,

Truly, yours, EDMUND M. IVENS.

sent government of the institution, illustrated by a few examples, and from the following particulars.

There is a great want of good order, In the morning when the cells are unlocked, the prisoners flock confusedly into the yard; and at the sound of the bell for meals, they move like an undisciplined mob to the mess room, jostling and crowding each other, and conversing as they go, and taking their seats as they enter.

There is a want of decorum in the behavior of the prisoners. We were met by bold staring in those who left their work to gaze at us, and by looks, whether in smiles or frowns, which indicated an unsubdued and audacious spirit in the culprits.

We have seen a man sleeping over his work. In the yard of the prison and during working hours, numbers of them are to be seen walking to and fro in pairs, in free and earnest conversation. Others were sitting in perfect idleness. Some of these we understood, were shoemakers, who by custom have a certain time for recreation, and others were convalescent invalids. But some of the former appeared to possess far too much boldness and assurance of demeanor for men under punishment, and some of the latter we thought, were strong enough to labor.

The indulgences which have been mentioned, do but lessen the privations of a penitentiary life, and they present a strong contrast with the Auburn prison, where there is no recreation, no loitering nor conversation, no limited tasks, or payments for over work, no trials between the prisoners and keepers, no beds to hide tools in, no covering for the head except a cloth cap, and no shoes but of wood.

It is made the duty of the principal keeper, by the prison rules, to hear and try all offences committed by the convicts, and to sentence and punish them, not exceeding a diet of bread and water, or by compelling them to carry a ball and chain, or lastly, by shutting them up in a room by themselves. The assistant keepers are not permitted to punish a convict in any case; they must submit to his irregularities, or leave their charge and make report to the principal for every petty offence. We may safely conclude, that the reports are seldom made, until repeated act of disobedience are endured, and as repeated threats made, that report will be made, if the disorders are persisted in. In all cases of corporal punishment, the trial and sentenee are by the board of inspectors: and two of them must at all times be present, when it is inflicted. We have been present when an assistant keeper reported a prisoner to the principal, and when the parties were heard pro and con, and mutual accusations were repelled, somewhat like the proceedings in small law suits. The prisoner has every motive to engage often in these trials of skill, by which he at least obtains relaxation from labor, and enjoys the triumph of having put his keeper on trial. The inspectors who meet on stated days, can indeed order corporal punishment, and in a few instances have done so. We saw no hearings before them. Punishments ordered upon formal trials, some days after the offences, must be rare and totally inadequate to produce prompt discipline, order, regularity and diligence. With such rules as these, it is by no means strange if insubordination should prevail throughout the establishment.

The act of the Legislature makes it the duty of the respective keepers under the direction of the inspectors, to inflict corporal punishment for a violation of the rules of the prison; but a proviso is added declaring it to be the duty of two of the inspectors to be present when such punishment is inflicted. This proviso was added to the bill, no doubt from motives of humanity; but has been, in our opinion, very injurious to the discipline of the prison. It is asking too much of inspectors, to pronounce judgment, and afterwards assist at the execution of the sentence: thus circumstanced, they will naturally be reluctant to condemn a man to corporal punishment.

22.

LIMITING FREIGHTS.—Our remarks two weeks ago with regard to the practice of limiting freights below the actual cost of carrying coal, and thus deranging the Coal trade in the summer season and causing high prices in the winter, has created some fluttering among the Boston dealers, and a couple were foolish enough to order the *Journal* to be stopped, which inclines us to believe that the shot took effect in the right place, as we did not charge *all* with these practices. We know that all are not guilty of it—but the effect is the same, so far as the vessels are concerned,—because as soon as one party gets a cargo of Coal shipped at reduced rates, the others refuse to pay more, if there are a number of vessels in port. Many Captains under these circumstances prefer taking a cargo of Coal at the low rates offered, sooner than be detained a long time, then leave the business in disgust and seek other employment, until freights rise again to a pretty high figure. Such has invariably been the effect of limiting freights at too low rates when vessels are plenty. Richmond dealers inform us that the system of limiting freights, as practised for several years past, has been one of the greatest evils that the trade has to encounter.

While on this subject we will take this occasion to say to those persons who stopped the paper on account of our remarks, that we frequently find it necessary, in pointing out evils to tread on some people's toes—and that those who feel the pressure, are the first to squirm. If every Coal dealer in New England were to stop our paper, it would not prevent us from calling attention to what we know to be evils connected with the trade, both at home and abroad.

Since the above was written, we have received a letter from an old subscriber, who also complains of our article—and states that he is not aware that any person had limited freights as low as $1 25. We were informed that such was the case in one or two instances. The writer also states that the dealers are aware that freights go down in the summer season—and that they prefer waiting until they reach the lowest point, before they lay in their stocks of Coal. To this there can be no objection, but the great difficulty is, that when freights reach the lowest paying point, there are some dealers who still want them lower—and vessels are finally driven off; and as the shipping season to the East, on advantageous terms, is confined to but a few months, the whole trade is deranged, and the consumers as well as the producers, suffer in consequence of this policy. Our correspondent states that the reason why Coal is sold the same as last year is, that the prices are generally too low in summer and too high in winter—and the object of the dealers is to equalize the profits by charging a little more in summer and less in winter, because the more needy classes generally purchase their supplies only as they want it. To this there can be no objection, provided it is carried out. But let there be a short supply in the market, caused by limiting freights, or any other cause, and how many of the dealers will keep the price of Coal down in the winter season? We will guarantee that not one of those who limit freights to less than a paying point, will do it.

We should regret exceedingly to make any charges against those who are innocent—but that freights have been limited below paying points, and that vessels have been driven away, causing short supplies, and high prices in winter, is notorious, and cannot be denied. We are positively assured that there are orders for Coal at Port Richmond for at least a month ahead—that this Coal cannot be shipped because there is a scarcity of Colliers—and the scarcity has been caused solely by the limiting of freights too low to pay. There must be some cause for such an extraordinary state of affairs, when we learn from almost every quarter that the shipping interests are suffering for the want of trade, while the Coal trade is suffering for the want of vessels. We were informed yesterday that there were several miles of Cars standing at Richmond unloaded, waiting for vessels to carry Coal away, although the Coal was all sold.

The life's blood has been sucked out of nearly all our operators, who are forced to sell to the "middle interests," and the limiting of freights on the part of dealers abroad, will soon absorb the balance. This will cause quite a revolution in the trade—it will fall entirely into the hands of a few large firms, who will open offices in all the principal cities and sell their Coal without the agency of unnecessary "middle interests" and dealers not absolutely required, who now purchase from them—the same as many of the companies are now doing—and the policy of the dealers abroad are aiding largely in bringing about such a change in the trade. It is the unnecessary "middle interests," or mere traffickers in every article which has been so largely multiplied of late years, together with the great increase of *money shavers*, that is checking the productive industry of the country so largely, and throwing us on foreign countries for so large a portion of the necessaries, as well as the luxuries of life, which could be produced at home, and which is the principal cause of present hard times. There must be a certain number of traffickers in every branch of business to distribute and exchange commodities—but we allude to those which are totally unnecessary, who make a profit out of the producer to sustain himself. This "middle interest" robs the producer of at least half his profit, and enhances the value of the article to the consumer—and the money *shaver* robs him of the other half on the paper received in payment for his products,—ruins him, drives him out of business—and he must either starve, traffic himself, or go to the Poor-house or the West in search of a better home. Between these two rapacious interests, which swarm the country like the Locusts of Egypt, God alone can help the producer now-a-days.

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as general in the prison, that a particular pri- conspiracy was formed to punish, or probably s with difficulty rescued by the keeper, after erously stabbed. It is a kind of common law s at discretion.

of the terror inspired by this example; and ittle the keeper, with his turnkeys and military otect a prisoner thus suspected. One of us had occasion, in pursuance of the objects mentioned in another part of this report, to have a secret examination of a prisoner who was at work in the yard. But the keeper thought it was not safe to that prisoner, to call him away from his work without making a plausible pretext for it; and the prisoner, who was wil-

ling to give the information required, was examined in a remote and private room, and trembled at the danger of being seen in our company.

As another example. It had been understood that the late executive had determined, as a general rule, to pardon all who were reported by the physician as incurably ill. The keeper mentioned to us, that this fact became generally known, and that no fact of general interest could be concealed from the prisoners. But the consequence was, a great increase of the sick list. So many had the art either to make themselves sick, or to feign it, that it considerably affected the hospital department.

The manner in which visitors are admitted to the prison, is among the worst evils that attend the institution; and it is an humiliating circumstance, that to visit the prison at pleasure on the payment of a shilling, has been treated as a right, and submitted to as such by the inspectors, under the threat of a suit. The person who thus compelled the inspectors to submit to his demand, was one whose visit they thought manifestly improper. But they stated to us, that they doubted the right of refusing him, and were unwilling to risk the event of an action at law. We need not add, that since this transaction, the intercourse between the prisoners and their confederates without, has become almost wholly unrestrained; and there is no evil in the prison which Mr. Board, the keeper, feels more sensibly, or of which he more complains.

The compass of this report would not suffice to enumerate the scandalous mischiefs resulting from this abuse. One prisoner was visited by four different women, each claiming to be his wife. The female acquaintances of the prisoners are continually admitted, under the name of relations. The throng of visitors is incessant, and becomes to the prisoners a perpetual exhibition to gaze at, to draw them from their labor, and relieve the tediousness of confinement. Rum, snuff, tobacco, money, tools, letters and messages, are introduced more or less frequently. Intrigues with state-prison solicitors and pardon-brokers, are in perpetual agitation.

It has been familiarly mentioned to us, at the New-York prison, that the frequency of pardons, though in other respects, a great evil, is one of the means which helps to keep the prisoners in subjection. As every one entertains hopes, so each one thinks it better to wait his turn, than to risk a rebellion. But, to the disgrace of our laws, it has become a kind of common understanding, that every prisoner on serving out half his time, is, in some certain sense, entitled to a pardon. It is claimed as a kind of right.

All we saw or heard, in that prison, goes to show, among the convicts, an unsubdued temper of mind; and in the officers, an imperfect control, supported not wholly upon the submission of the convicts, but partly, also, depending on their good will, and influenced by their opinions and feelings.

Upon this method of governing, our opinions are entirely decided and unanimous; and we hesitate not to state to the Legislature, our settled conviction, that the government of felons, in a prison, must be absolute, and the control over them must be perfect. The principal keeper must be a man of firmness, discretion and vigilance; and he ought to be the responsible person, in all matters relative to the conduct and safe keeping of the prisoners. Without this, there can be no discipline nor economy. Every consideration requires this; the safety of the lives of the officers, and of the prisoners themselves, requires it. It is indispensable to economy, and to profitable labor; and if there can be any hope of reformation, it must not be where the prisoner stands upon his rights, and exacts conditions, but where he is brought to a sense of his degradation, and feels the sadness incident to dependence and servitude, and becomes willing to receive any indulgence as a boon, and instruction, advice, and admonition, as a favor.

24.

"Coal Tonnage on Tide Water—Screw Steam Sea Colliers between Philadelphia, Boston and other Customer Ports for Pennsylvania Coals."—The Philadelphia *Railroad and Mining Register* of June 27, has an article under the above caption, on the advantages of steam colliers to take the place of sail vessels in the Coal service. It thinks that a few screw steam colliers on the plan of those that supply the London market, plying between Philadelphia and Boston, would work well for the interests of both places. It argues shrewdly, that the steam colliers are the very thing needed not only for *cheaper coal transportation by sea*, but to protect the interests of Port Richmond as a Coal shipping point, which are now seriously threatened by the Auburn and Allentown Railroad, and Elizabethport, which promises to become the chief Coal shipping point in the United States.

Philadelphia at last, through the medium of a portion of her press, is becoming awakened to the folly of the policy which has actuated her during the past quarter of a century. Hostility not only to her own interests directly, but to that important Trade from which she has derived her sustenance has made her the jeer and by-word of rival cities, and crippled the Trade which she should have esteemed it her duty and privilege to foster. The folly of her course is now becoming apparent to her. The Auburn and Allentown Railroad looms up, attacking her at two vital points, and she is becoming alarmed. And well she may. Years since every prominent dealer was driven to locate his office in New York, where he could obtain facilities for the transaction of his business, and Philadelphia became a mere shipping point about equal in importance to Schuylkill Haven of old. Inducements are now springing up for the establishment of an extensive Coal shipping point on the sea board, *via.* the Auburn and Allentown and New Jersey Central Railroad, and Philadelphia will indeed, be compelled to move promptly and energetically, if she hopes to preserve one iota of the vast trade which this Region has poured into her lap. She has trod on the worm; it turns and stings her.

The Coal Association.—Like a caged lion, Schuylkill county lies, completely within the power of her oppressors—bound down and almost worried to death by her keepers. To such a condition have her operators been reduced, that many of them scarcely know to whom they belong, and seem to have repudiated "self-possession" long since. Like however, the harrassed and enraged lion, they are preparing for one herculean effort to snap asunder their fetters. If they succeed, woe to their oppressors, for they will be scattered to the four points of the compass. Singly, the Coal Operators of Schuylkill county can be vanquished and kept in subjection, but aroused and united, they will demand their rights—a reasonable profit on their business. Under a long course of oppression they have been most shamefully robbed. Now patience has ceased to be a virtue. The lion is aroused and prepared to defend himself to the death, if needs be. But little remains to lose.—Everything to gain. Their oppressors may rest assured that in making the effort they will not show the white feather.

It is gratifying to be enabled to state that notwithstanding the opposition experienced by the Coal Association, from its enemies, and those who are ignorant of its peculiar merits as a protection both to the producer and consumer, that it is effective, and so far has accomplished much good. By limiting freights, etc., endeavors have been made to throw impediments in its way. Futile the efforts, however, to crush it. It will and must be sustained, if the Trade desires to be repaid for its labors and investments. Dissolve it, and ruin stares the Region in the face—the market will be seriously affected—and consumers in the end will suffer. Sustain it, and Schuylkill County will rise far above injury from the action and hostility of the unnecessary middle class of the Trade. Let the policy of the Association be appreciated; resolve to sustain it, and we are safe.

A correspondent of the Philadelphia *Ledger* furnishes the following statement of the condition of the Coal Trade and Operators of this Region, which is true. It is the nearest approach to the truth that the *Ledger* has succeeded in compassing, in publishing comments upon that Trade. A change is gradually taking place in this Region, notwithstanding the gloomy statements of the annexed. Experience has brought with it useful lessons, and we think the darkest days of the Trade have passed. "Carbon" says:

The condition of the Coal operators of Schuylkill county at the present time is worthy the most serious consideration of the press of Philadelphia. A looker-on would make some notes for the *Ledger*. It is well known the miner is now selling his Coal to the Richmond shippers from 10 to 20 cents per ton less than cost of production. A miner cannot sell and ship his own Coal over the Reading Company's wharves, at Richmond, as the Company give those wharves to certain rich middle men, free of charge, who keep their offices on Walnut street, and who make most money when the miner is most embarrassed. It has been proposed to the Reading Company to keep a certain number of wharves under a public shipper of their own selection, to ship Coal for any miner that chooses to send it to him; *but no*, their rich friends on Walnut street would not approve it, for then they could not put their screws to the miner, as in case they refused to give a fair living price for the Coal, the miner could sell and ship his own. When orders for vessels are scarce they fill up their wharves, and when the miner comes down at the first of the month, as is usual, to sell his product for the month, they are full, and can continue to fill their orders for perhaps two or three weeks without any new increase.—The miner having no other large outlet for his Coal, must either take what is offered or go home and stop his works, and allow his miners to leave him, for unless they get work they cannot live.—Those ignorant of the mining business can scarcely realize the expense associated with stopping a large colliery worked by shaft or slope. It is often cheaper to sell at a loss than stop, as so

the journals of the Assembly, of 1823 cers, with great particularity, and w

The rules of the New-York prison with the general remark, that no rul the officers have the proper qualific rules can be necessary. Order and rity in the officers, united with cour among the prisoners perfect submis tute the perfection of state prison g

In the course of these remarks, u have occasionally expressed, or i their comparative merit, and the Those views may be summarily ex

That the Auburn prison, combi discipline enforced in it, presents t

1st. That the sentence of the la tainty, since escapes must be near an attempt at insurrection, therefo

2d. Consequently, that the prison is governed with great comparative safety to the lives both of keepers and prisoners, which, in cases of insurrection, are necessarily in danger.

3d. Also, that it is thus safely governed with more economy. A proof of which is, that the inspectors at Auburn, have lately, as recommended by us, discharged a part of their guard; and we may here anticipate what is mentioned more at large in another part of this report, that when the system shall be perfected. we hope to see the guard dispensed with entirely.

4th. The separate cells by night, and the silence preserved always, entirely prevent all contamination among the prisoners; thus at once is excluded the great question of the classification of convicts, which has so much engaged the attention of benevolent men in Europe and America. By this system, every prisoner forms a class by himself; and to all moral and social purposes, he is insulated. The novice in crime, may work for years by the side of the most expert felon, without making any progress in the mysteries of criminality.

5th. The prisoners are compelled to work diligently and profitably, and are deterred from spoiling their work. This is a great and important topic, to which we only briefly refer now; but we remark, that economy forms in a great part the basis of our report; which goes very much upon the hope, that a state prison rightly conducted, and in a proper situation, may defray all its own expenses of every kind; and upon the belief that it ought to be compelled to do so, if possible.

6th. That the sentence of the law may be thus certainly, safely and economically executed, without leave asked of the prisoners, or favor gained from them; whence all the benefits of an unfettered execution of the laws.

7th. We have fully expressed our opinion, that the state can not and ought not to undertake, at the public expense, the moral reformation of that particular class of men, who are convicted of crimes. But we cordially admit, that such reformation is most desirable, while from experience we know that it is most unlikely. And we now add, as an important feature of this system, that if any human means can, as it were, enforce repentance and amendment, it is this. The entire separation from all criminal associations, the sobriety of feeling consequent upon temperance and labor; and most of all, the sadness of solitude, must frequently make serious impressions. We have seen manifest proofs of such impressions among the prisoners, and only wish there were reason to expect they would be permanent.

In suggesting the plan of government, which we would recommend for the prisons, it was our intention to have stated at length, the great evils which we conceive result from frequent changes in the officers of the prisons; and we had drawn up an enumeration of the changes, which have taken place from the beginning. We have no doubt, that to these changes is, in part, to be attributed, the want of success in the system. And we have endeavored to seek the best remedy for the evil, consistent with the nature of our institutions. We submit our opinion, that both state prisons should be under the general administration of commissioners, to be appointed by the Legislature; for the following reasons and objects, namely: To produce uniformity in discipline; that the improvements and advantages of each prison, may be readily introduced into the other; to withdraw the government of the prisons, from the influence of local interests, and from the jealousies produced by real or supposed cases of favoritism; and finally, to give the utmost possible permanence and stability, to the administration of the prison system. This we think, is best effected by making the appointment of commissioners by act of the Legislature, and leaving the appointment and removal of the agent, to those commissioners.

"CARBON" has written another very sensible article which appeared in the *Ledger* of the 9th inst. Information of this kind the Philadelphians were sadly deficient of. The press of that city, with but few exceptions, is just about as narrow and contracted in its views, as a large portion of the people, who act as if the city was the State, and nothing beyond its limits worthy of notice. The press in many portions of the State teem with information of vast importance to Philadelphia, but the fear (or studied policy not to do so) of the city press to give credit to a country paper, deters them from laying this information before the people—or if it is done, it is in a short garbled extract, without any mention of the source from which it was derived. This great want of courtesy on the part of the press of Philadelphia has in a great measure caused the opposition to that city, which greets the ears of all Philadelphians when they travel through the State—and which also excludes the Philadelphia press from circulation among the people of the State. With the exception of those points where the penny press is carried over Railroads *gratis* and is reached by these papers, there are from two to three New York papers circulated in this State to where there is one from Philadelpha. The press also appears to be under a kind of *censorship* in the city—it appears to be controlled by cliques and factions, and different monied influences, which prevents its giving information on important movements which might militate against some invested interest of that city, even when the interests of that city are deeply interested. To such an extent is the character of the Philadelphia press commonted upon throughout the State, that when an article does appear—favorable to the City and Pennsylvania interests, conflicting with Philadelphia investments, that the greatest surprise is expressed among the people—and you hear almost every person asking their neighbor whether they had seen the article. Such was the case with the appearance of the articles of "Carbon," in the Philadelphia *Ledger*—we had at least fifty inquiries addressed to us, asking whether we had seen the article in question—and by way of comment they would remark—"what in the world is the matter with the *Ledger*—they have published the truth for once, with regard to the Coal Trade of Schuylkill County—and seemed to wonder where and of whom they obtained it—it must have been sent from the country."

We make these remarks more in sorrow than in anger. Every reader of the *Journal* knows how we have battled for the interests of Philadelphia and the Coal Trade—how we have pointed out from time to time the necessity of removing the grievances which has operated so severely against our interests and the trade of this and other Coal Regions, which built up that city and made it equal in population to New Yorkand threw the balance of exchango in her favor; but instead of these grievances being removed, they have only been increased—until the life's blood has been drained from those whose industry and enterprise has enriched them—all monied facilities denied them by the Banks—were thrown into the hands of *shavers*,—until the Coal operators were taxed more heavily than those engaged in any other business. Every time attention was called to these matters they were met by a sneer, and any attempt made to redress them was sure to call forth denunciation from portions of the press of Philadelphia, until the producers there abused in attempting to sustain themselves—harrassed by high charges of transportation—all monied facilities cut off to carry on the trade—have thrown their influence in favor of opening up routes of transportation to other cities—and the large mass of those who reside in Philadelphia, engaged in the Coal trade have opened their principal offices in New York, where they inform us, every facility is given to the Coal trade by the monied institutions, and every effort made to attract them to that city.

When the Auburn and Allentown Railroad is completed, and Coal begins to pour into New York from Schuylkill County, as it does from the Lehigh, Wilkesharre and Scranton Regions—when they discover that the distance is only 138 miles from Pottsville to New York by this route—with a shipping port at Bergen Point on the New York Bay, where the largest class vessels now known in the world, as well as the smallest craft, *can take in their Coal at the wharves in the Bay—and that freight to the East from that point ranges the whole year from sixty to seventy-five cents per ton less than from Port Richmond, the Philadelphians will begin to realize the position in which they are placed with regard to the Coal Trade.*

It is not surprising that Philadelphia is becoming alarmed at the aspect of affairs, threatening to deprive her of a trade to the East of more importance to her than her Southern trade, which she may retain. Look at the figures.—Of 1,500,000 tons of Coal shipped annually from Port Richmond, about 1,200,000 tons go East, or 4-5ths of the aggregate shipments. Had Carbon, if a Philadelphian, and the press of that city waked up two years since, to the importance of this matter, Philadelphia might have saved herself from a loss, which notwithstanding the proposed steam colliers, will inevitable overtake her. Had she paid more attention to the Coal interests of Pennsylvania, which are inseparably connected with her own, and had she not answered our appeals with sneers and taunts, "Carbon" might at this time have saved his ink, and Philadelphia felt less alarm than she at present so justly experiences. A narrow, contracted, selfish policy always recoils with double power upon itself. The fact is pretty evident by this time to the press and business men of Philadelphia.

Freights from Port Richmond to Boston have advanced to $1 60 @ $1 65, an advance of from 5 to 10 cents since last week.

[FOR THE MINERS' JOURNAL.]

...e same trade; and in neither prison is this

...nditions of the convicts, and of the laboring ...d who therefore contribute to the expense ...heir exertions, respectively, presents a case ...untry, the labor of the working class is often ...many inconveniences and disadvantages, of... ...rsonal danger; while to that labor are su... ...port and education of children; the distres... ...ortunes. But if we also survey the situation ...nditions, the convict and the free, it is most ...ork is all in favor of the former. They have ...abor, or burdens of any kind; they have no ...health or sickness; no interruptions of any ...provided to enable them to work to the best ...s and implements, and the utmost personal ...l regular supply of every article wanted.

...ter of a trade, does not accomplish as much ... merely because he will not. The question ... the public, is simply, whether he shall be ... by the community in comparative idleness. ...quantity and quality of work done in a pri... ...as if done by willing and free hands without; ..., and we do not expect to see it.

...burn prison in June and July last, the num...

ber of prisoners was 310, and they were of the following trades and employments, viz:

Coopers, tailors, shoemakers, and weavers, under contract, and earning at an average, 26 cents per day,	91	
Of the same trades, at work for the prison,	19	
		110
Employed at the building of the prison, viz:		
Blacksmiths,	18	
Carpenters,	16	
Masons, laborers, stone-cutters, &c.	108	
In the kitchen, tenders, &c	14	
		156
Total number of laborers.		266
In solitary confinement,	36	
In the hospital	8	
		44
Total		310

The gross expense of the prison for the last year, including the rations and clothing of the prisoners, the pay of all the officers and guard, and the fees of sheriffs in the transportation of convicts, amounted to $16,995 02, as per statement C, of the appendix. Now, if 266 of these men were employed as the 91, and were to earn, on an average, 26 cents per day for 300 days in the year, which is a moderate allowance both for time and earnings, the income derived from their labor would amount to $20,748 per annum, and would cover every expense of keeping the 310, and leave a profit to the state of $3,752 98. This would also leave an average of 8 convicts for the hospital, and 36 to be otherwise disposed of, namely—a few for solitary confinement, and the remainder for preparing food, clothing, &c. for the use of the establishment. And should the alterations in salaries be sanctioned, and the savings be made as proposed in statement E, of the appendix, there would still remain a profit to the state from that prison, of $3,129 09. We are led to believe, therefore, that there is a fair prospect, provided the necessary employment can be obtained, that the convicts in this prison may hereafter support the whole establishment by the product of their labor. This opinion is much fortified, by observing the earnings of the prisoners, at present working under contract. The coopers, although not yet fully taught their trade, earn from 18 to 30 cents per day; and there is a demand for 100 additional convicts on that contract. The tailors earn about the same; the shoemakers from 30 to 60 cents per day; and the weavers average 41 cents. Weaving is a trade easily learned, and will probably be the most proper employment for such hands as are not sufficiently robust for stone cutting, or other hard work. The increase of our manufactories is furnishing a great demand for this kind of work.

At the time of our first visit to the New-York state prison in June last, we were furnished with a detailed account of the manner in which the convicts were then employed, together with the amount of their daily earnings. The prisoners were employed, or accounted for as follows:

At weaving, dyeing, spinning, and other matters connected with the manufacture of cotton and woollen cloths,	229	
As brush-makers, bellows-makers, blacksmiths, coopers, pilers, trunk-makers, coppersmiths, shoemakers, tailors and oakum pickers.	275	
Carried forward,		504

28.

CARBON AND SCHUYLKILL COUNTY.—Another article appeared in the Philadelphia *Ledger* on Tuesday last, signed "Schuylkill County." The writer professes to be acquainted with the Coal Trade, denounces the positions of Carbon, defends the "Middle interest," and casts a fling at the *Miners' Journal*. If the writer is in the mining business (which we do not believe,) the sooner he gets out of it the better—because, if he does not leave the business, the business will unquestionably leave him for the lack of the necessary knowledge on his part to carry it on. The positions of this writer are untrue in fact in almost every particular—his whole object seems to be to heap abuse on the management of the Reading Railroad Company, and screen the middle interest at Richmond.

Now, it is well known that we are no apologists for high prices of freight—nor have we ever failed to condemn these high rates—but this was not the cause of the evil this year. It was caused entirely by the "middle interest" at Richmond, as we will endeavor to show by commenting on a few of the positions taken by the writer of the article in question. He says:

"The 'middle interest does *not* influence the Reading Railroad Co. Proof—The unreasonably high rate of tolls which the shipper not the miner has to pay.

The middle interest does *not* monopolize the Richmond wharves. Proof—There have been for the greater part of this season, two wharves remaining idle, which the R. R. Co. would gladly have given to any responsible parties, miners or middle men.

"It has become very much the fashion of late years, with some people who ought to know, and a great many who *do* know better, to visit upon the heads of the 'middle interest,' all the opprobrium and blame which should justly fall upon the Reading Railroad Co.

"Even the thoughtless men among the small miners, who depend for their market upon the 'middle interest,' and who have had opportunities (if not from their own experience, from their observations of the experience of others) of seeing the fallacy of any arrangement of shipping their own coal from Richmond. Even some of these join the hue and cry; following the direction of that very unsafe and badly magnetized compass which guides the course of the *Miners' Journal*. The cry has been sounded until they who really *know* better almost believe it themselves."

To the first we reply—no person charged the "middle interest" with controlling the Reading Railroad with regard to tolls, because they have been arranged for several years past between the Railroad and Canal, based on the rates promulgated by other regions—but the "middle interest" have heretofore controlled the Reading Railroad by compelling them to give them their wharves to the exclusion of others who wanted them, by threatening to throw their business on their rival, the Canal. The miner who sells his Coal at Port Richmond pays the freight on his Coal the same as the "middle interest."

To the second, we will reply, that so long as the middle men hold Wharves at Richmond, it is utterly impossible for a Miner here to take a Wharf and do business, unless he has a very large capital to invest. Several took Wharves with a view of selling their own Coal, two or three years ago. They had a prime article of Coal, and always had a domand for it, consequently they felt like pocketing the commission paid to the middle men themselves. After their arrangements were all made, they soon found out on entering the market that they could not sell their prime Coal—why—because the middle men knew who the purchasers of this Coal were, and they immediately offered them the same Coal from other veins at a less price, on say six months' credit, with a renewal from 2 to 6 months longer if necessary, by paying the interest. The Miners could not sell at such unusual long credits, and several who took wharves and hold them at Richmond were forced to pay commissions to middle men for selling their Coal, or have the price reduced on them—although every pound of the Coal is ordered before it is mined. Only last Spring, a firm here having a heavy investment in Collieries, found that they would inevitably be ruined, if they were forced to pay heavy commissions to the middle interest below—took a wharf, and they were nearly swamped in the contest to get a market for their Coal, in opposition to the "middle interest"—but having a choice article, and having friends who assisted them, they have finally established themselves in selling their own Coal, without the interposition of this middle interest, and they save at least 25 cents a ton. If half the Wharves were idle at Richmond, would it not be madness for any of our Operators to attempt to take a Wharf there, unless he had all the capital required for *his whole business completely at his command*,—particularly after some of the heaviest Operators, who are wealthy, have been compelled to succumb to the middle interest.

To the third we will reply—Although the rates of toll and transportation are about 25 cents too high for the trade, in comparison with the prices at some other points—still these high rates would not have effected the trade materially—if it had not been for the conduct of some of the middle men at Richmond, as we will show:

It was well known that those engaged in Mining in Schuylkill county, had engaged Mr. Tucker to organize the trade, with a view of preventing Coal falling to the same ruinous rates that prevailed last year, which broke up about one-fourth of those engaged in mining. These low rates, (which were caused in a great measure, by the middle interest forcing prices down to the lowest point, they being only buyers of Coal and not miners, consequently feeling no interest with the Miner who held Wharves and mined his own Coal,) effected the business in all the other regions—and the Companies abroad were either forced to stack their Coal or sell at the same low rates. Many of these Companies had entered into contracts with purchasers, containing a provision that if they lowered the price at any time during the season, they were to lower the price on the whole supply.

Towards the close of the season, when prices became ruinous, these Companies found it would be a saving to pile their overstock and limit the shipments, in preference to reducing the prices, and they did pile considerable Coal.

In the Spring the Companies with large piles on hand, held back and were determined not to be caught in a similar predicament again—and did not promulgate their prices until the prices were fixed in the Schuylkill Region. Mr. Tucker had personally conferred with the companies abroad and obtained their consent to co-oporate with the dealers in the Schuylkill Region in fixing a fair price for Coal on board vessels at the shipping points. As soon as the rates of toll and freight had been adjusted between the Reading Rail Road and Schuylkill Canal, those engaged in mining in Schuylkill County held a meeting, and they agreed on $3 85 @ $3 95 per ton for White Ash Coal on board at Port Richmond, according to quality, and circulars were issued accordingly. No price was named for Red Ash, because no other region furnishes Red Ash Coal. This was about 25 cents less than the opening prices of the previous year, and but bearly remunerated those engaged in mining. These prices were communicated to the other regions by Mr. Tucker, and they all agreed to conform, except the Pennsylvania Coal Company, who gave no decided answer—but *their* rates were not yet promulgated. A few sales had been effected at these rates, when a couple of "middle firms" at Port Richmond commenced offering Coal on board as low as $3 65 @ $3 70, being from 20 to 30 cents per ton less than the rates agreed upon. This was followed by the circular of the Pennsylvania Coal Company offering Coal at $3 80, 20 cents less than usual on board at Port Ewen—and the Scranton Company, who had conformed to the Philadelphia rates, were forced to lower their prices 20 cents a ton to correspond. Other middle houses, and some who mine a portion and buy the balance, followed, sooner than loose their customers, and offered their Coal also at ruinous rates

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to the producing interest in this County. A few firms engaged in mining, who had choice Coal, preferred reducing their business, to lowering their prices, and they, by saving commissions paid to the "middle interest," are doing a fair business—and the Coal nets them at Port Richmond from $2 00 @ $2 10 per ton—at $3 90 on board.

These are the *facts*, and show conclusively to every business and thinking man where the real difficulty lies, yet this sap-head, who signs himself "Schuylkill County" declares that it is the Reading Rail Road *only*, and not the "middle interest" that is ruining the miners and operators of Schuylkill Co. and curtailing our trade—that the Coal operators, who have no wharf facilities, and are forced to sell at any price to the "middle interest," (and some of those engaged in mining who buy the largest portion of their Coal, are not free from censure;) are very *perverse*, and instead of censuring them, they ought to applaud their conduct and consider them their *best friends*. The author must either consider the Coal operators of Schuylkill County a set of arrant fools, ready to swallow any nonsense, or else he places himself in a similar position before the public.

Let us see how the system of selling Coal at $3 65 on board at Richmond works:

Freight and tolls to Port Richmond for the East, - - - - -	$1 60 per ton.
Shipping expenses, - - -	15 "
Profit, *which is small for a middle man*,	15 "
	$1 90

Which deducted from $3 65, leaves to the miner here only $1 75 per ton for his Coal, which is less than the cost of delivering it into the cars of the Rail Road Company, in nine instances out of ten.

When the miner, who is a wharf holder, sells his own Coal at Port Richmond at $3 90, it will stand as follows:

Freight and tolls to Port Richmond for the East, - - - - - - - -	$1 60
Shipping expenses, - - - - -	15
	$1 75

Which deducted from $3 85, price agreed on for second quality Coal by the trade in April last, leaving $2 10, to the miner, which would barely pay him a profit on his business. The policy of the "middle interest" therefore is to depress prices to the lowest point—even below the cost of mining, if they think it necessary—it does not effect *their interest*—the policy of those engaged in mining is to keep up the prices to a remunerative rate—and no consumer has a right to expect his fuel below the cost of production. The "middle interest" is antagonistic to the mining interest—and depresses the miner of Coal—the other interest is the opposite, and fosters the production, by which means only can the consumer depend on a regular supply of fuel—and by which means only can the Rail Road Company expect to increase their trade. And besides the wharves properly belong to the producer of Coal, and not to the intruding "middle interest" which is not required at that point any more than it would be at the shipping ports of Schuylkill Haven, Port Carbon or Port Clinton.

The "middle interest" at Port Richmond effects the trade in other respects—it destroys the character of Schuylkill Coal—these men are nearly all engaged as Agents in selling Coal from other regions for operators who have their own wharves, and who ship their own Coal. This business is done in connection with the business at Port Richmond—but the miners here who sell the Coal to the "middle men," cannot ship their own Coal at Port Richmond, nor is it kept separate—it is all mixed together from a half dozen different mines, and in many instances they buy a portion of good Coal at fair prices, to mix with the trash brought from a half dozen sources at very low rates; and this is sold as Schuylkill Coal. A purchaser receives a cargo—he condemns it—wants better Coal—If you don't like the Coal, we will send you a cargo of Lehigh, Hazleton, Spring Mountain or some other Coal; the price is higher, but we guarantee the Coal—this is shipped by the miner to their order in good condition—the Coal may suit, and without making any further trial of Schuylkill Coal, it is all discarded as bad. The miners of course must sell or stop—it is sink or swim with them—and if the price is very low the Coal is prepared very poor—and thus the character of Schuylkill Coal is constantly assailed by this "middle interest," which is hostile to production in Schuylkill County.

Those few who have wharves at Port Richmond, who sell and ship their own Coal, find no difficulty in selling it even at higher prices than the "middle interest" can get, (except when they have the control of choice kinds and ship it separate,) they not only sustain themselves at Richmond, but they can sustain their Collieries in Schuylkill County also—but those who are forced to sell to the "middle interest at Richmond, under the present system, are bound to be ruined—or seek other outlets.

In addition to these difficulties, as soon as it is known that any of our operators, of limited means, are forced entirely into the hands of the "middle interest," he is looked upon, to use a common expression, "as a goner," his paper is suspected, usual facilities cut off, and he is turned over to the tender mercies of those preying hyenas, yclept Shavers, who, Shylock-like, get not only the remaining flesh, but the life's blood also.

These are some of the reasons why the Port Richmond Coal trade is suffering, and causes ruin to stare thousands in the face in Schuylkill County—for every interest dependent on the Coal trade is equally involved with the miner.

There are other reasons why the Coal trade is suffering at Port Richmond. The rates by Railroad to Philadelphia, New York, and all places that boats can reach by Canal, are higher than by Canal—they ought to be a shade lower to secure a full proportion of trade. Dealers abroad who are judges of Coal, prefer paying the freight themselves, and will pay from 5 to 10 cents a ton higher for Coal by Canal than by Railroad, because they stand a better chance of receiving the Coal they buy direct from the mine—(they are afraid of the mixing business at Port Richmond)—consequently any miner who can sell his Coal by Canal seeks that avenue. It is also the interest of the Coal miner here, who holds his wharf at Richmond, to seek the Canal for that business reached by boats, because it takes less capital to do business by that avenue—an important feature now a-days. The tolls and transportation to Port Richmond are $1 80 per ton, cash every week, with a drawback of 40 cents to New York and 20 cents to New England. This sum of $1 80 has to be paid weekly by dealers at Pt. Richmond, and the drawback is only paid back when the Coal is shipped;—when freights are limited the Coal lays for weeks and months,—the sellers risks, in case of loss are largely increased, besides the large increase of capital. In shipping by Canal the miner here only pays about 63 cents toll on the Schuylkill Canal, instead of $1 80, and the purchaser pays the freight and other tolls to its place of destination, giving great advantage to the seller here, both in point of capital and risk. So long as the Canal has facilities to carry Coal, the Railroad must be content to be beaten by the Canal, and take only such Coal as the Canal cannot take. The Canal has always been considered a slow team in this region,—but she has caught up to the Railroad, and has again beaten her this week in a fair field. The same

system is beginning to be engrafted on the Canal by the "middle interest," and if successful, the same difficulties will have to be encountered there also. See to it miners in time. *One of the great advantages of the Canal is, that the miner sells direct to the dealer, without the intervention of the "middle interest," with a less investment of capital, with less risk, and at higher prices, on account of the preference given to unmixed Coal.*

With the increased facilities from other Regions, and the greater competition in the trade, the time has arrived when a change in the policy of the Reading Rail Road Company must take place—in future arrangements—if it cannot conveniently be done now—they must remove the "middle interests," or the "middle interests" will not only destroy the trade of Schuylkill County, decrease the tonnage of the carrying Companies, but it will remove the management of the Reading Railroad Company also,—and that is their object—either to compel the management to come into their terms—or drive them out by crippling their trade, destroying their revenue—and "Schuylkill county" is one of the instruments used to accomplish their object, whoever he may be.

We think therefore, that every reader will agree with us that the "middle interest" at Richmond, is the *foundation* of nearly all the evils in the trade that have spring up and which are eating out the very vitals of every producer. All the other evils, more or less spring from this great evil, and like every good physician, who understands his business and desires the recovery of his patient, he will not tamper with the lesser sores, but will proceed at once to remove the great ulcer first, and the minor ones will heal up of their own accord.

We thank "Schuylkill County," even if he is the dupe of others, for the opportunity he has given us to point out the evils that exist in the Coal Trade; and the causes of the decline of the trade at Port Richmond, and also the reasons why it is increasing by Canal. In conclusion we will take this occasion to remark, that a portion of this article we have penned with regret—we are acquainted with a number of the middle dealers at Port Richmond, and know them to be honorable business men—they conduct their business on correct principles, and we have no hesitation in stating that if we were in the same position they are, we would in all probability do just as they are doing. We don't think however, our conscience would permit us to *cut quite as deep* as some of these men do. We do not object to them as business men—but we do contend that they ought not to be there in the present position—that their business, conducted even on correct business principles, is hostile to the interests of the miner in Schuylkill County—hostile to the interests of the trade, the development of Schuylkill County, and also hostile to the interests of the Rail Road Company. But few prudent Miners, with ample capital even to carry on a legitimate business, with past experience, would desire to take even the vacant wharves and enter into competition with this wealthy interest, which has swallowed up all the profits of the producers who fell into their clutches:—but remove this middle interest, and abundance of capital will always be found to enter into any business where there is a chance of securing a fair profit.

All the other regions, and even the stockholders of the Pennsylvania Coal Company, the stock of which is going down almost daily, will be glad another year to enter into any arrangements to secure a fair profit on Coal—as experience has taught them all that *paper calculations* of the cost of mining and carrying Coal, does not come up to the stern and unerring teachings of *actual experience*.

the block. It costs 8 cents per foot for tools. marble easy to be cut. The transportation rtained that the present price is higher. All ork.

the New-York prison upon bad marble, and use for building, or good marble had been vas unsuccessful; it may be proper to remark, -Hampshire prison were also attended with ell. The warden, therefore, forced it into es; and as soon as some houses were built of f the material brought it into full demand.

a convict is expected to make two feet of good rought us, we find, as nearly as we can calcu- ave earned per day on an ave- n from the Massachusetts prison, by which it earn from 60 to 70 cents each a day.

nce at the Auburn prison the present season, building had been let out on contract, at as en actually so let out, the prison would have This fact seems still more striking, when we d at the building have been picked men, and state may be estimated at from 75 to 100 cents r labor, according to the statements made to

portant a question, to state on the other hand, e occurred to the minds of some of us, as to the g of stone as profitable at the New-York prison at purpose, to state the advantages and disad- New-Hampshire, when compared with that at nvicts in the New-Hampshire prison, according ssession, was 58; while in the New-York prison r, the hospital expenses of the last year were re no female prisoners; while in the latter the $1900, and the number of female convicts 41. is agricultural, possessing no large commercial neither are there any large cities or towns be- icinity, or any inducement for the migration of itories; while the counties in this state which with subjects, labor under all the disadvantages mestic and foreign commerce, so well calculated most abandoned characters to their towns and

n these facts, therefore, that the same proportion ble of undergoing the labor of the quarries, can unity of persons, such as are usually sent to the hom are enervated by disease and dissipation, as of New-Hampshire, presumed to be principally But there are advantages possessed by New- the vicinity of the quarries to the city, the quality of transporting it, which may perhaps equal the he quality of the laboring prisoners.

eneral head of economy, is the particular consi- ch may be introduced into the current expenditure this report annexed, contains a collective view of

the savings in the expenditure of the New-Y
now be made; to which we have subjoined
we propose in the appointments and salarie
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Statement E exhibits the increase as rega

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These two statements contain for the mos
on a few items it may be proper to make so

1. Of clothing. In this article we were of
might be effected. We recommended to th
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2. Of blankets and socks. These articles
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which will no doubt be done.

3. It was stated to us by the keeper of the
tice of providing beds for the convicts, had p
of the establishment; that it was attended wi
the occasional shifting and changing the stra
preserve cleanliness, and prevent infection,
searching them for prohibited articles and i
much time.

At Auburn some of the convicts slept on ha
duck, which cost about fifty cents, and was h
majority of the convicts, lodged on the floors
was the opinion of the agent, that those who
best health.. Since we were there, he informs
matts, made by the convicts, of the husks of I
hammocks and beds. They are hung up in t
are laid on the floor, and used as beds; by which, neither bed ticking, hammocks or straw, will any longer be wanted or used, except in the hospital.—Should this practice be adopted in the New-York prison, and which we are of opinion, ought to be done, there would be a saving effected, at least to the amount of the cost of all the bed ticking.

A large proportion of the prisoners at New-York, it was observed, wore straw hats manufactured in the prison. The cost of this article can not be great, but rather more it is conjectured, than the cap worn by the prisoners at Auburn, composed of the same coarse cloth of which their clothes are made; and which we have recommended to be adopted. A convict wearing such a cap, would, if he should escape, be instantly distinguished as such, and be liable to be retaken. Every thing that tends to make escape difficult, contributes to the ease and economy with which the prison may be kept.

4. Of rations and supplies. It is our opinion, that a state prison ration should consist of the cheapest possible articles of healthy human food, the fewest in

31. Table.

Showing the cost of Bear Valley Coal delivered at various points on the route to Havre-de-Grace, the great depot for the supply of the cities and towns situated upon the sea-board.

No. 1,—Harrisburg.

Rent of mines	per ton	50
Cost of mining	"	40
Rail-way transportation, 22 miles		50
Canal "	to Harrisburg, 28m. a ¾ct,	21
" toll	" 3m.	9
Cost delivered at Harrisburg,		$1 70

No. 2.—Columbia.

Rent, mining, and rail-way transportion	1 40
Canal to Columbia, 58ms. a ¾c. per ton pr m.	44
" tolls to " 58ms. 3 mills pr mile	18
Cost per ton delivered at Columbia,	$2 02

No. 3, Lancaster.

Rent, mining, &c.	1 40
Canal to Columbia	62
Canal and Conestoga navigation to Lancaster	48
Cost delivered at Lancaster, Conestoga landing	$2 50

No. 4,—Havre-de-Grace.

Rent, mining, &c.	1 40
Canal to Havre-de-Grace, 92ms. a ¾c.	69
" toll to " 92 a 3 mills pr m.	28
Cost of Coal delivered at Havre,	$2 37

No. 5,—Baltimore.

Cost of Coal, including all expenses at Havre,	2 37
Continued voyage in the same boat to Baltimore,	20
Cost per ton delivered at Baltimore.	$2 57

No. 6,—Philadelphia.

Cost, &c. at Havre	2 37
Continued voyage in the same boat to Philad'a.	43
Cost per ton delivered at Philad'a.	$2 80

No. 7,— New York, Boston, &c. Coastwise.

Cost, &c. per ton delivered at Havre	2 37
Transhipment at Havre per ton	20
Freight coastwise	1 00
Cost per ton delivered at New York, Boston, &c.	$3 57

*It will be perceived by the foregoing table that it osts 12 1-2 cents more per ton to deliver coal at Lanaster by the Conestoga Navigation, than at Havre-de-race. This may be accounted for by the fact that a onsiderable charge is incurred for the hire of the steam ow-boat to cross the Susquehanna dam, at the mouth of e Conestoga, and from the disadvantages to the boat wner of not being able to obtain return freight at Lanaster; but there will always be a reasonable chance of btaining light freight at Philadelphia, Baltimore, and lavre—say, salt, plaster, fish, [illegible] eries, &c.

It will be perceived that I have allowed in every case beral profits to all concerned, which may be found more an sufficient to compensate industry and reward enterize.

In my next I will extend my views of this important bject, so as to show the bearing that this region is des[illegible]ed to have upon the general prosperity of our country.

Lancaster, Dec. 19, 1842. H. M.

From the Intelligencer & Journal.

The Coal Region.

No. I.

THE BEAR MOUNTAIN, OR ROUSH GAP RAIL WAY.

This road is intended to connect the Coal region of Lykens' and Williams' valleys with the Wiconisco feeder of the Pennsylvania canal, at the town of Millersburg, in Dauphin county, 12 miles above the Susquehanna canal Bridge and dam at Duncan's Island, and 28 miles above Harrisburg. The length of the road will be twenty two miles, extending from the Susquehanna, north east, up Lykens' valley, near or upon the line of the present rail road, which is merely a horse track, ten miles, thence along the northern side of the mountain, twelve miles, to Roush Creek Gap, in Schuylkill county, nineteen miles west of Pottsville, and as every acre of the Bear mountain abounds with Coal of the best quality, the proprietors are only waiting the certainty of the work being entered upon with spirit, to commence operations along the whole northern line. This will also be the signal for the numerous individuals and companies possessing coal lands on the south ridge, bounded by Williams' valley, to press forward their works.

The north mountain is designated on the map, "The Bear or Short Mountain;" the south, "The Big Lick;" but they unite within three miles of their termination, forming for about that distance one mountain, 850 feet high, level upon the summit, and dipping suddenly into the valley, it looms upon the eye of the traveller, ascending the valley, like an ocean-promontory, towering over the waters at its base. Travelling north-east on the level surface of the ridge, on the lands of Thomas P. Cope, a small depression is discovered near the centre of the mountain, which gradually increases in width and depth, until a beautiful spring bursts forth, forming a little rivulet, running north-east which is the commencement of the division of "the Short Mountain," into two distinct ridges—"the Bear" and "Big Lick." This little stream after running in a deep narrow ravine about a mile, is met by another, of larger volume, which has its rise about four miles north-east of this "meeting of the waters," at a point where it would seem nature had attempted to re-unite the severed brethren, the valley being upheaved in the centre, forming a connecting hill or causeway between them, near six hundred feet in height. The valley or cove thus formed in the heart of the mountain is called "Bear Valley," and contains about four hundred acres only. This valley has its outlet with the united strength of the two streams, into Williams' valley, by the Little Bear Gap, four miles north-east of Snydersville, at the western end of the coal region. There is no corresponding gap through the North, or Bear Mountain.

It is in this "Little Bear Gap" all the coal sent to market, under the name of Lykens' Valley Coal, is mined—the proprietors having constructed a horse-track railroad from that point to the river. But they have hitherto labored under great disadvantages from the imperfect and slight manner in which the road was made, and the necessity of carrying their coal in scows across the Susquehanna at Millersburg, to be boated on the Pennsylvania canal. These difficulties will disappear when the proposed permanent rail way, and the Wiconisco feeder, are completed.

We now take our course over the ridge, which nearly brings the summits of the two mountains to a level, three miles east of Gratztown, where another spring rises, aided by numerous branches—taking its course north-east, again dividing the two mountains, forming a valley of nearly half a mile in width, and after running about four miles, suddenly encounters "Roush Creek," which crosses its path at right angles, and by their united force, with the aid of numerous auxiliaries, have formed that extraordinary gap called "Roush Creek Gap."

This gap cuts both mountains down to their base, crossing them at right angles, the precipices rising on both sides of the narrow gorge, 1,200 feet perpendicular. The entrance into the gorge is by the Sunbury road, leading to Pine Grove. The whole length of the pass, including the narrow valley which separates the mountains longitudinally, is not more than two miles. The gap in the Bear Mountain is crossed at right angles by twenty distinct veins of anthracite coal, of excellent quality, dipping to the south at an angle of 45 degrees, varying in thickness from six to twenty-seven feet, and cropping out at the sides and summit of the mountain, affording breasts of from 1,000 to 1,500 feet, presenting on both sides of the pass forty working veins, fifteen of which are now open in the eastern side. The drifts discharge immediately on a level with the public road, supplying fuel at the present time to the lower part of the valley, in which considerable quantities are consumed, particularly in the villages, and by the smiths, who prefer it to the bituminous coal of the west branch. Between some of the coal veins in the north-east ridge, four veins of iron ore have been traced, one of which is sixteen feet thick, presenting a breast of 1,350 feet overhead.

The veins of coal and iron ore in the South or Big Lick Mountain, dip to the north at an angle of 45 degrees, the veins corresponding in position, thickness, and height of breast, as nearly so as can be ascertained, with those of the north mountain, dipping under the narrow valley which separates the two ridges, being in fact the same veins, forming an immense coal basin, embracing the two mountains, and extending under the valley to a depth believed to be at least equal to the height to which they rise above the stream in the gap.

Thus we have in this extraordinary gift of nature, eighty veins of anthratic coal and sixteen veins of iron ore, enterable on a level with the bottom of the gorge, and workable, on an average, 1,200 feet overhead, unimpeded by water, and never rendering it necessary to employ machinery to raise the mineral, until thousands or millions of tons of coal upheaved above these valleys are expended.

As near the centre of this gorge through its whole length, as far as practicable, it is intended to lay the eastern section of the railroad, so that the cars may be loaded in the mines, all of them being sufficiently large to admit light tracts being laid suitable to the burden cars, thus saving the cost and labor of reloading at the entrance to the mines, facilitating the business, and preventing, in a great measure, the accumulation of a heavy depository of coal, usual at the mouth of mines, which, in this locality, where the mines range within short distances of each other, would occasion great inconvenience.

The system of forming galleries overhead, has been already adopted in these mines, with apparent advantage, and proves to what an extent mining may be carried on in this district. A single vein of ten feet thickness, worked in this manner, would give ample space for 350 workmen, and would yield 1,400 tons per day, allowing each hand to average four tons per day; and in this distance of only one and a half miles, would give employment to 28,000 miners, producing 118,000 tons per day, or upwards of 50,000,000 tons per annum; and not one ten of the whole amount raised from beneath the level of the gorge, nor not a tunnel required to reach a mine.

This calculation will appear extravagant, but it is only given to illustrate an opinion advanced by numerous scientific gentlemen who have critically examined this locality, and who unite in declaring there is no spot hitherto discovered on the surface of the globe containing such a mass of mineral coal, or presenting such advantages for mining. One gentleman, who has visited all the principal mines in our State, and is well acquainted with the business of mining, explored that district during the month of October, and after examining every mine and every advantage which the locality presented to his eye, declared his firm belief that one hundred thousand men could be employed to advantage in that thorough cut of nature's forming, without impeding each other.

But no one district can supply the whole demand, nor should it. The door of competition ought and will be kept open; but when the day arrives, and it is not far distant, upon which the avenues to those mines—the Wiconisco canal and the Bear Mountain railroad—are united with the Susquehanna and Tide-water canals, forming an unimpeded line of communication with the great Chesapeake bay—such a reduction must take place in the cost of this fuel, that thousands of tons will be required, instead of the hundreds consumed at the present time. The consumption of wood in our cities and towns, and even on our farms will be greatly reduced, and in many places abandoned altogether; then, and not till then, will our forests be preserved for nobler purposes than warming our rooms, cooking our provisions, and manufacturing our iron; and then, and not till then, will that enormous drain upon the resources of our country be closed,—the introduction of foreign iron.

These statements may appear extravagant, but however they may be deemed, I think I can establish their truth, by the test of plain figures, which cannot deceive:—

TABLE,

Bear Creek

From the Intelligencer & Journal.

The Coal Region.

No. 2.

THE BEAR AND BIG LICK COAL BASIN.

My first communication closed with a statement of the cost at which coal can be delivered at various points on the descending navigation of the Susquehanna; also, at Lancaster, Havre de Grace, Baltimore, and at the cities and towns situate on or contiguous to our Atlantic coast. After making those calculations, I availed myself of interesting documents upon the subject, received from gentlemen of science, who have spared no pains to arrive at accurate results, taking care, in every case, to leave nothing to conjecture, and at the same time allowing fair and liberal compensatinn for industry, and profits to all concerned.

To those who are unacquainted with all the advantages possessed by the region which I have endeavored to describe, it may appear singular that coal can be delivered from those mines, at the points stated, at so important a reduction from present rates. Of this, however, the following facts will be sufficient to satisfy the minds of all that there can be no error to the pnsitions assumed

THE MINES OF LUZERNE.

These mines, situated in the neighborhood of Wilkesbarre, are at an average 80 miles farther from market than those of Lykens and Bear Valley, and the empty boats having the same distance in returning, (in the whnle 160 miles) add very materially to the cost of transpnrtation from that region, in time, carriage and toll, which cannot, in the whole, be less than 2 cts. per ton per mile; but fixing the minimum at 1½ cts. per ton per mile, for 80 miles additional distance, it amounts to per ton 1 20

Cost of Bear Valley Coal at Havre,	2 37
Assuming all the circumstances nf mining &c. to be equal, would make the Luzerne coal at Havre cost,	3 57
being an advanee of upward of 50 per cent nver the cost of Bear Valley coal delivered at the same point.	
At Harrisburg Bear's Valley can be delivered at per ton	1 70
At Harrisburg Luzerne at an additional charge of $1 20 or 70 per cent. advance	2 90
At Columbia Bear Valley can be delivered at	2 02
Luzerne at 60 per cent. advance, or	3 22
At Havre de Grace Bear Valley will cost	2 37
Luzerne	3 57
Being an advanee of over 50 per cent.	
Again, if we apply the same rule to the mines nf the Shamoken mountain the additional distance of transportation being 30 miles at 1½ cts per ton,	45
In this district the difficulty of mining and cost of tunnelling will add to the cost per ton,	20
Increasing the cost of every ton delivered over that of Bear Valley,	0 65

The next and last coal deposite, which at present aids in supplying the lower Susquehanna with fuel lies seven miles south nf Roush Gap, between the Big Lick and Sharp Mountains, and abont six miles north of Pine Grove. The system of transportation from these mines is by a horse track railroad, six miles, to Pine Grove, of a grade that will not admit of the employment of steam power, except by stationary engines, and from Pine Grove by boating on the Union Canal to Middletown, 52 miles, thence on the Pennsylvania Canal to Columbia, 18 miles.

Transportation by this line will always he tedious and expensive—First, because the horse track railroad is nf so heavy a grade, that a single 3 ton empty burden car is as much as one horse is able to haul back to the mines.—Second, the mining operations are costly, the hills being low, the breasts of the seams rise above the water line from 20 to 80 feet only.—Third, the veins are irregular, confused in their dips, and frequently cut off, or interrupted, by what are called *troubles,* i. e. masses of stone and rubbish, crossing the veins, which have to be removed, whatever the expense, or the vein is lost. Geologists account for these interruptions on the hypothesis, that at the great internal combustion which charred, or carbonized those mighty layers of timber, that had reposed upon the planes upon which they grew, and were overwhelmed, layer after layer, and growth after growth, for successive millions of years, upon the upheaving of the plain, and the consequent sinking of the centre and borders into valleys, the tremendous explosion of the liberated gases and the instantaneous change of the moisture and the hidden reservoirs of water into vapor or steam, convulsed the whole region. The vapor escaping upon the lines of the borders of the upheaving masses, threw the adjoining districts into confusion, and caused those interruptions and *troubles,* in which the coal seams, and sand stone, the shale and the conglomerate, are frequently found mingled, in great bodies, crossing, displacing, and occupying the positions in which the coal had been supposed to lie, sometimes for 14, 20, 50, and 100 yards, causing great expense to tunnel through and remove the rubbish, and in many instances ruining the miner. This is the character of those comparatively low hills which contain coal, lying between the Big Lick and Sharp Mountains.

To whatever the speculations and opinions of philosophers and geologists may lead—whether they are founded in truth or spring from the excursive aberrations of the mighty in mind, further researches into the recesses and interior of the globe may determine; it is enough for us to know, that the region of which we write bears every mark and character we have endeavored to describe.

QUALITY.

Fourth. The character nf the Pine Grove or fourth mountain coal, is inferior, in many respects. It is light, slaty, brittle, friable, consequently loses considerably in mining, removing, and transporting; on the other hand, it ignites freely, gives a clear flame, but is not strong nor lasting.

Fifth. The Union Canal only admitting boats of from 25 to 30 tons burden, and being interrupted by numerous locks, and subjected to a heavy toll, renders the transportation very expensive.—These disadvantages are severely felt. One gentleman, extensively engaged in mining in that district, declared, last summer, when on a visit of business in this city, that he could not deliver coal at Columbia for less than $3,50 per ton, and at Lancaster, by the Conestoga Navigation, for less than $4,12½; whereas, by the preceeding calculations, it would appear that the Bear Valley coal can be delivered at the former place at $2,02, and at the latter for $2,50, by the cargo.

It must not be forgotten, that the coal boats employed on the Susquehanna Canal, carry from 75 to 80 tons, and cost very little more to navigate than those employed on the Union Canal, which carry only 25 or at most 30 tons. These circumstances taken in connexion with the high charge for toll on the Union Canal, and the slow progress of the boats in consequence of detention by the numerous locks, account for the inabilty of the colliers of Pine Grove to compete in the great coal markets with those of the Bear and Big Lick mountains, when the proposal rail-road and canal are opened.

In all these calculations I have been studious to be above, but in no instance below, estimates carefully prepared by gentlemen of scientific and practical knowledge of every branch connected with the business; and as all I have advanced in relation to it is derived from personal acquaintance with the great coal field of Schuylkill and Dauphin counties, and sustained by several gentlemen distinguished alike for their knowledge and accuracy, to whom I acknowledge myself indebted for valuable communications embracing every important branch of the subject, I do not think I ask too much when I request my fellow-citizens to give me credit for the truth of my statements, until they have examined them carefully and thoroughly, and then I shall be confident of receiving an award in favor nf every advantage I have claimed for the Bear Valley Mines.

H. M.

COAL BY THE NORTHERN CENTRAL RAILROAD.—It is perhaps fortunate that this road is in successful operation to the coal fields of Pennsylvania, as a regular supply of domestic fuel can be had by its means during the approaching winter. We are informed that for the past few days this trade has been quite active and the demand for cars increasing daily. Yesterday over *two hundred* cars, ladened with coal, left the several mines for Baltimore. The Trevorton Company commenced operations on Monday last, and expect to send daily one hundred cars for city consumption. The present stock of coal in this market is estimated as short from 30,000 to 50,000 tons of last year, but it is hoped that the price, during the winter, may be kept down to a reasonable standard through the supply which can now be had by way of the Northern Central Railway.

Written for the Intelligencer & Journal.

The Bear Valley Coal Region.

No. 3.

In the various statements given in my two preceding communications upon the difference of the cost at which coal can be delivered from the various mines of anthracite situated in the valley of the Susquehanna, at Havre de Grace, I assumed it, as a principle, all other circumstances being equal, that the disparity in favor of the Bear Valley mines over those of Pine Grove and others was in the distance of transportation. Fortunately I am in possession of a document which enables me to state the advantage which the former possesses over the latter, in other respects, correctly.

What are called the Pine Grove mines, are on Lorberry creek. The first, "The Mammoth mine," which was on fire for nearly two years, and only extinguished, after great exertions, in the fall of 1841. The distance from this mine to the Basin at Pine Grove, is, by a horse track railway, nearly 5 miles, with a descent of 636 feet, averaging over 100 feet per mile.

Cost of mining, per ton, coarse coal,	65 cts.
Loading and hauling out, men and teams per day $14—average quantity brought out 36 tons per day,	35 "
Extra cost carrying down inclined plade,	25 "
Thence to Pine Grove,	35 "
Small expenses and contingencies,	15 "
Toll 52 miles on Union Canal, at 1 cent per ton per mile,	52 "
Carriage on Union Canal in boats of 25 tons,	52 "
Toll from Middletown to Columbia 3 cts. 20 miles,	15 "
Carriage at 1 cent per mile,	20 "
	$3,14
If sold at Columbia for $3,50 per ton, would leave only for the whole profit	36
	$3,50

While the Bear Valley coal can be delivered at the same point, as shown by previous calculations, at $2,02, with a profit to all hands.

This is the vein that furnishes the greatest body of coal from that district. There are three other working veins, the Peacock, the Grey, and the Diamond veins, all bearing the name of Pine Grove coal. The price demanded at the wharf at Pine Grove is about $2,50 per ton, leaving a profit of about 75 cents per ton to be divided between the proprietor and renter.

The great advaniage the Bear Valley mines possess over those of Pine Grove and the Sharp mountain, consists in working in the Gap as herctofore described, having no expense of forming Adits or Tunnels, and the drifts to reach the coal being only the removal of loose stones for short distances, and erecting a covering of a few yards, at the entrances, the roofing being so firm as to make propping rarely necessary, and the grade of the rail road never exceeding 36 feet in the mile, and descending the whole distance. These advantages are so apparent, that none can visit this gap, now that 13 veins are in order, without being struck with its superiority over every other district yet discovered.

Quality of the Bear Valley Coal.

The quality of this coal is considered, by judges, equal to the best anthracite yet brought into use in our state, and greatly superior to most of that sent to market. It ignites freely and burns in open grates, with a bright, lofty flame, and leaves little cinder or clinkers. It is used exclusively by the smiths and the proprietors of steam mills in Dauphin county, who prefer it to any other coal for its strength, and it is believed would answer admirably for steam vessels. In mining it breaks in large masses, free from slate and dirt, and will require no screening to render it fit for markct, and is so firm as to suffer little deterioration in weight, by handling or removing. The following analysis of this coal was communicated to me by a gentleman, to whom I am indebted for much of the information contained in this article. He states that "it bears a striking similarity to the Welsh coal from "Ynicedwyn," now used at Crane's celebrated iron works:"

Specific gravity	1,390
Volatile matter	8,066
Carbon	87,360
Ashes	4,574
	100.

Quantity.

As regards the immensity of this deposite, the communication of my correspondent coincides so nearly with many of the facts stated in the previous publications, that I shall only refer to them as corroborative, in part; but where he has added to the information already given, I conceive it too valuable and too important to lose the opportunity of giving it publicity:

"The quantity may almost be said to be inexhaustible. There are now, at Raush Gap, thirteen veins open, and in working order, on the East side of the Gap, and the same number, corresponding in size and quality, can be opened on the West side. These veins are from four to thirty feet thick, and have a breast of from one thousand to fifteen hundred feet above water level, and run about three miles in length on the lands of The Bear Valley Coal Company. One of these veins, now working, and measured the present month, is 27 feet in thickness, and contains 5,632,000 tons, calculating a cubic yard to the ton. Those who are acquainted with this region, and whose judgment can be relied upon, have given it as their opinion, that there is at least 300,000 tons of coal in every acre, and allowing 600,000 tons to be mined each year, there is a sufficient quantity within the bounds of the lands owned by this company, to last two thousand years."

Facilities of mining in Raush Gap and getting to market.

Upon this part of the subject, my first number was, perhaps, sufficiently particular, but I cannot and ought not to let pass the opportunity of giving force to those facts, by the evidence of a gentleman who has devoted much time to the investigation of every mattor relative to it.

"In this particular," he says, "the Bear Valley Coal has decided advantages over every other in the State of Pennsylvania.

"It all lies above water level, and the mines can always be worked without the aid of steam power or machinery of any kind. The veins all run through the mountain longitudinally, dipping south at an angle of 45 degrees, the drifts will be carried in on a slight elevation sufficient to drain the water from the mine. This gradual descent from the interior of the mine, will enable a miner to push the laden car out upon the rail way, without the trouble of resorting to horse power. The labor of lifting the coal into the cars upon the rail way will also be dispensed with; "shutes" will be used to conduct or slide the coal immediately into the cars upon the rail way below, and will be transported thence in the same cars, upon the rail road, 22 miles to the canal near Millersburg, where the load will be dropped into the boats by opening the bottom or the ends of the car. The only screening this coal will require will be provided for in the construction of the "shutes."

"Lykens' Valley."

"This valley, through which the Bear Mountain rail road will pass, is one of the richest farming districts in Pennsylvania. It is about 30 miles long, and varies in width from 4 to 6 miles. The settlers are principally of German descent, industrious thriving farmers. Pottsville, which lies about 20 miles East of Raush Creek Gap, and the Schuylkill mining district, depend principally upon this valley for their supplies of provisions, which are wagoned over the mountains from a distance of from 25 to 40 miles. In this particular, those engaged in the mining operations of Bear Valley, will enjoy evident advantages over Pottsville, Mauch Chunk, Bear Meadows, &c., Lykens' and Mahantongo vallies always affording a bountiful supply of the necessaries of life, at moderate prices.

"The coal regions of the Schuylkill and Lehigh occupy a space of about 8 miles in width, embracing the mines which produce two-thirds of all the coal raised East of the Allegany mountains. These same 'measures' passing West toward the Susquehanna river, are contracted at Raush Gap into a compass of less than two miles in width, and will be worked *above* water level—and thousands of years shall pass away before necessity will require mining *below*."

The Bear Mountain Rail Road Company.

"This company was incorporated in July last, with a capital of $300,000. One half the stock is already pledged, and within one year they will complete a substantial Rail road from the mines to the canal. This road will be laid 6 feet wide in the track, with a descending grade, which will never exceed 36 feet per mile, and will be capable of transporting any quantity of coal that the market may require. Plans and estimates will be submitted in our next, explanatory of the manner of construction, expense, &c.

Mining.

"Offers have already been made by experienced responsible miners, who are now engaged in other coal regions of the State, to lease the mines in Raush Gap at 50 cents per ton, and will engage to mine at least 300,000 tons per year:—or they will contract to mine for 40 cents per ton, deliverable in the cars, on the rail way, at the mouth of the mines

My correspondent is of opinion that two cents per ton per mile would be a very liberal allowance for transporting the coal on the rail way, which being 22 miles long, gives 44 cents. I have made the calculation for the whole distance at 50 cents. Should the company find their profits too large it will be easier to reduce than to raise.

The following calculation is from the same pen with the substitution of 50 cents per ton for transportation on the rail way instead of 44 cents.

On the mining and transportation of 300,000 tons Coal.

The owners of the coal land would receive at 50 cents per ton,	150,000
Pay to miners at 40 cents,	120,000
Rail Road Co. for freight at 50 cents,	150,000
State toll on canal,	90,000
Boat freight,	225,000
	$ 735,000
The cost of coal delivered at Havre would be	2,37
At Baltimore, about	2,57
At New York or Boston	3,57

"The lowest price at which good coal has ever been sold in the New York market by the cargo was $4,75 per ton, and then it is positively asserted money was lost. Relying upon the statements given, it is plainly seen that the Bear Valley Coal can be sold in New York, when the improvements are completed, at 25 per cent. less than any other good coal, and leave a profit to all concerned. If any one should think that the charges allowed for freight are too low, I answer they are the rates at which the business was done during the last season. Should they advance, a corresponding advance will of course take place in the price of coal, but that can in no case make any material difference."

I shall endeavor to bring this subject to a close in my next number.

H. M.

Lancaster, December 28th, 1842.

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ommunity, are generally,

tion; of which, the one being in these states
e most expensive of all laws to execute, neither
ess it should be thought fit to send our colored
ment which would willingly receive them.

a system as that hereby recommended, which
by way of taking out of society all the criminal
e convicted, and by compelling them to furnish
charge, as is hoped, and with little expense

l of punishment.

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iminal police; on the means of which, several
ed by our investigations.

lons would render punishment proportionably

ered needful by our vicinity to a British pro-

ways interfere in the first instance to prevent
per object is reparation for the injury, in all
is applicable. These as regards individuals,
As regards the public, a reparation more or
all cases. It is a subject of limited applica-
tion; on which, however, one or two amendments in the laws will be proposed.

Written for the Intelligencer & Journal.

The Bear Valley Coal Region.

No. 4.

IRON ORE.

In attempting to convey an idea of the mineral treasures which Raush Gap offers to the enterprising, the immense beds of Hematite and Bog Iron Ores must not be overlooked, and in giving a description of them, and their immediate contiguity to and connexion with the coal seams, I cannot perform a more acceptable service to the public than by giving the description in the words of my correspondent:—

"Six of these veins of Iron Ore have recently been proved, varying in thickness from two to six feet, lying next to and running parallel with the coal.

"In several instances, a thin layer of earth and rock only intervenes between the coal and iron, the openings to one being within a few feet of the other, and on the same level. These openings or entrances to the veins, are elevated above the bottom of Raush Creek Gap from thirty to forty feet. At this elevation the public road is cut through the Gap, the debris being thrown over, makes a good highway from forty to fifty feet wide, forming a precipitous slope to the creek. Below and against this bank or slope, furnaces for smelting iron can be erected, the top of the stack reaching to the level of the openings to the mines, and both the iron and the coal can be mined and put into the furnace at an expense not exceeding one Dollar per ton each, and with a vehicle not more costly than a wheelbarrow. The creek is amply sufficient for driving all the machinery requisite, in proof of which it is merely necessary to state, that there is now a flowering mill, with three run of stones, a short distance below, on this stream, doing an extensive and profitable business.

"Independent of the veins of Hematite Iron ore, there are at the same elevation, very extensive beds of Bog ore, each kind yielding about 40 per cent. of iron of an excellent quality, having been tested at Pottsville and other iron works. One of these beds is stated as being 16 feet thick and having a breadth of 1350 feet.

"With regard to the *quantity* of iron ore producible at Raush Gap, an examination by any competent person will be sufficient to convince him that, for many centuries to come, it cannot be exhausted. Taking into account all the facilities for obtaining ore and fuel, and the convenience of water power, it is confidently believed that pig iron can be produced for less than twelve Dollars per ton, and that stove castings, rail road iron, &c, can be furnished at from 30 to fifty per cent below the present rates, which are for stoves, holloware, castings for rail ways, &c., at the furnaces, sixty dollars per ton. The pig iron of the Danville furnace, is now selling at 27 Dollars per ton; the duty on foreign pig is $9. At that furnace in the smelting process, anthracite coal is solely used, the coal costing two dollars per ton delivered, and their stove and holloware castings are equal to the finest and best produced by the most celebrated works in the state. In proportion to the superior quality of the coal, and the convenience in every respect at Raush Gap, for the establishing of extensive iron works—including furnaces, forges, rolling mills, nail factories, &c., will be the power of materially reducing the cost of iron in every branch of manufacture, and greatly reducing or entirely annihilating the importation.

There is also found an abundance of fire-clay in Raush Gap of good quality, and sand. The surface of the Coal lands is covered with a heavy growth of white oak, intermixed with ash, beech, hemlock and pine. The entrance to the Gap is immediately from Lykens' valley, which at this point is about one mile wide; about half a mile below Pine creek unites with Raush creek, and about two miles further down, Deep Creek makes a valuable addition to the water power, which descending Lykens' valley about two and a half miles, breaks in a northern direction, through Mahantongo mountain cutting it down to its base, forming a junction with Mahantongo creek near Klingerstown about eight and a half miles distant, in a northward direction, from Raush Gap, and thence to its junction with the Susquehanna River about 16 miles, by the course of the creek. This is a fine constant stream, well adapted to the erection of any kind of works requiring considerable power. An act was passed by the legislature, authorizing the incorporation of a company to render this stream navigable, from its mouth to a point in the vicinity of Klingerstown. This project it is probable will be abandoned, as Klingerstown is only two miles distant from the line of the proposed rail road one and a half miles east of Gratztown, thence by the rail road to the landing on the canal at Millersburg, 15 miles.

The next document which I shall present to my readers is the report of an experienced engineer, J. Spalding, Esq., giving a "statement of the plan of the rail road to be constructed from Raush Creek Gap to Millersburg, with the estimated cost, together with the cost of the necessary machinery, and the annual expense of transporting over the road three hundred thousand tons of coal per annum."

Abstract of the Report, &c.

Entire length of the road from Raush Gap to Millersburg, by actual survey, is 22 miles. The road is either a perfect level, or at a descending grade towards the canal, the greatest inclination being but at a grade of 36 feet in the mile:—the minimum radius of the curves 2,000 feet.

"It is proposed to construct the road in the most substantial manner, to lay the track with heavy iron rails, width of track 6 feet—engines of 12 tons weight, with 6 wheels, geered so as to obtain the adhesion of the whole weight of the engine.

The amount of coal which an engine can transport from the mines to the canal in a given number of trips, is limited by the weight of the empty cars with which she can return up the grade of 36 feet per mile; it is deemed advisable to construct cars of about 3 tons weight, capable of carrying 9 tons of coal, each. The increased width of the track and an improved mode of building the cars will enable the company to do this without inconvenience, and to use them without injury to the road. Thirty-four cars of this description will weigh 102 tons, and contain 306 tons of coal. To draw this load the engine must be able to draw 408 tons upon the level parts of the road and to draw 102 tons of empty cars up the grade of 36 feet per mile. The power of a first class 12 ton engine being able to draw 178 tons up a grade of 36 feet per mile, and 558 tons upon a level road, at a speed of from 8 to 10 miles an hour, it will therefore be making the most liberal allowance for a bad state of the road or machinery, to assume that an engine of this kind, with cars made on the plan spoken of, will at all times and at great ease, be able to transport at one load 300 tons of coal from the mines to the river and return with the empty cars.

Allowing the road to work but 250 days in the year, two engines, each making two trips daily, would deliver 1200 tons per day, or 300,000 tons of coal in 250 days. To do this amount of business, three locomotives will be required, two on the road, and one in perfect order, to take the place of one that may be disabled or requiring repair, and 110 cars.

The cost of the road with an H. rail of 56 pounds per yard, laid on a continuous bearing of wood, is estimated as follows:—

Grading 22 miles at	$2,000	$44,000
Superstructure 22 miles at	$1,500	33,000
Chairs and Spikes		11,000
1936 tons Iron rail at	$65	125,840
Branches and turns out		4,000
Land Damages		10,000
Buildings		5,160
Water Stations		1,000
Engineering and Superintendence		12,000
Cost of Construction		$246,000
Add for 3 Locomotives	24,000	69,000
" 110 Coal cars	45,000	
		$315,000

Annual expense of transportation, running 4 trains daily for 250 days, will be

Repairing 22 miles road at	$500	$11,000
Wear of Rails at 2 per cent		2,516
Depreciation and repair of Engines		3,000
do do Cars		7,500
Fuel		2,000
3 Engine-men	250	1,875
3 Firemen	100	750
6 Brakemen	125	1,875
Grease for Cars and Engines		600
Repairs of buildings		500
Superintendence and clerks		3,884
Total cost of Transportation		35,500

For transporting 300,000 tons at 2½ cts per ton per mile, or 50 cents per ton for the whole distance, the company would receive $150,000, from which

deducting the expense of transportation, there would remain a nett revenue of $114,500, or a clear profit of over 36 per centum per annum on the whole capital invested in the road, machinery and buildings.

The Engines in this case would travel 44,000 miles at an expense of $35,500, or about 81 cents per mile of travel.

It is believed that a very liberal allowance is here made for all the expenses of transportation, and that it is more than the actual cost of working many of the roads in this country, even with a mixed and irregular transportation, as will be seen by a reference to the cost of working the following roads:—

Boston and Lowell road	81¼
Boston and Worcester	93
Richmond and Fredericksburg	80
Georgia Road	62
Utica and Schenectady	80
Lowel and Nashua	85½
Easton	81
New Bedford and Taunton	82
Western	65½

"The average of the above rates of expense is about 79 cents per mile of travel.

"When we take into account the facts that the usual expense of men employed at the water stations is here dispensed with by taking in a sufficient supply of fuel for the trips at the end of the road, that the fountains at the water stations being supplied by springs, the cheapness of fuel which for this road will be obtained for less than one-fifth its usual cost on other roads, and the lightness of the cars in proportion to the amount of freight, it is evident that this road can be worked *as cheap* as any other road in the country, and it is probable that the actual cost of transportation will be less than the estimate here given."

The report of the Engineer above given, bears evidence of a perfect acquaintance with the subject, and of having been prepared with great circumspection and care. It is in every particular a valuable document, giving in a concise and perspicuous manner every information that those most interested in the subject could desire; and it is with no little anxiety we look forward to the bright prospect that is dawning upon us—the fruition of the hope we have so long and so ardently cherished of the completion of this great work.

There is nothing now wanting but a proper direction of the capital, the enterprise and the industry of the people of our state to bring her inexhaustible resources into action. The impulse is given and felt. The people of Pennsylvania are turning their eyes homeward and inward; they are gradually withdrawing their thoughts from speculative schemes, from foreign influences, foreign manufactures, and foreign trade, and preparing to concentrate their exertions and consolidate their strength to elevate their own state to the enviable and powerful position which she is destined to hold in the union.

Our national government, awakenened at last to a sense of the duty it owes to the country and to its own honor and stablility, has interposed a protecting hand favorable to the manufacturing industry of the union, and it is to be hoped will never again be seduced by the wily blandishments of interested party politicians, under any pretext—even under the specious name of *pacification*, to *compromise* the true interests of the country.

No state in the union has suffered more severely than Pennsylvania, from the death blow that was given to the great and widely spreading manufacturing system, particularly in her iron, in which she had made so rapid a progress, and in which so much capital and labor were embarked, and in the successful prosecution of which the whole body of the people, from Maine to Alabama, were interested: and on which the government itself, whether in peace or war, must depend as indispensable to its prosperity in the former, and the right arm of its defence in the latter: One of the consequences of this erroneous policy, has been the suppression of many valuable iron works in our state, the ruin of their proprietors, and the beggary of hundreds of manufacturers, mechanics and laborers—reducing thousands of families to a state of destitution, that previously lived comfortably and happily on the earnings of their indutry.

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see next page

That our prospects are brightening is true, but it is after much suffering—suffering of which we have not seen the end. There are none among us so dull who do not now comprehend the cause, and there are none so blind as not to perceive the remedy. Capital will no longer flow from us to create banks in Mississippi, or Kentucky—to make rail-roads in the far west, or swell the capital of great commercial cities, to be employed in filling our country with foreign gew-gaws, trumpery and manufactures, to the ruin of our own industrious community; and those capitalists among us, who have not lost their all, in distant speculations—in banks, rail-roads, and other corporations, hundreds of miles distant, and some nearer home, of which they knew nothing, and over which they could have no control, will hereafter, it is hoped, employ their capital to encourage enterprise and industry in their own neighborhood, under their own eyes, in the management of which they shall have a voice, and the benefits resulting from which they will reap in common with their fellow citizens.

The inexhaustable veins of Coal and Iron ore in Rausb Gap, not fifty miles in a direct line, from the city of Lancaster, of which a description was given in preceding numbers, requires a rail road 22 miles in length, and the completion of the Wiconisco feeder of the Pennsylvania canal, upon which there is comparatively little work to be done, before the coal or iron can be brought to Market. The calculations of the expense of this work have been made with great care by engineers of extensive practical experience, always rising above rather than falling below the actual cost of similar works now in operation.

In pressing these works forward to a speedy completion, every inhabitant of the lower valley of the Susquehanna, including the cities and towns on the Chesapeake bay and those upon the Atlantic sea-board, are deeply interested.

1. The citizens of Dauphin, Mifflin, Perry, Cumberland, York, and Lancaster, in Pennsylvania, and Harford, Cecil and Baltimore, in Maryland, will be the first to experience the benefits, inasmuch as they will be enabled to purchase their coal, of the very best quality, at from one-third to one-half the price they have heretofore been compelled to pay.

2. Limestone along the Susquehanna, in Dauphin, Cumberland and York, but particularly in Lancaster, upon the borders of the Conestoga, and in the vicinity of Columbia and Marietta, will become instantly valuable, for supplying lime to Cecil and Harford counties, and to Baltimore, M'd, at a much cheaper rate than the farmers and builders in those counties have hitherto been able to obtain it, and yielding a handsome profit to those engaged in lime-burning, and giving employment to hundreds now in a state of suffering:—and here we take occasion to recommend the *blast-kiln*, as now in successful operation at Lebanon, reducing the cost of the lime 50 per cent.

3. Our proprietors of blast furnaces and steam mills, will be able to supply themselves with coal of a very superior quality at a much lower rate than they have heretofore been able to obtain it at.

4. It will materially reduce the cost of fuel to the rich as well as the poor, and place it within the reach of those of the most circumscribed means to make their families comfortable at that season when distress is most prevalent.

5. As our state possesses great and important advantages over every other in the Union, natural and artificial—in her central position—her well distributed and immense water power—her facilities of communication with all parts of the Union by free navigation, by canals, and by rail roads—her abundance and low price of provisions—of fuel—of Iron—of Timber—for the establishment and support of manufactories in every branch, it becomes the duty, as it is the interest of every citizen of our state in particular, to use his influence and employ a portion of his money to forward this great work.

6. Bear Valley, in consequence of being the greatest depository of Anthracite coal and of Iron ore in the Union, from which coal and iron can be supplied more conveniently, abundantly and cheaper than from any other part of Pennsylvania or of the United States, gives the valley of the Susquehanna a pre-eminent claim upon the government for the establishment of a National Foundry.

7. Increase of consumption of Anthracite coal.

In 1820, There were only bro't to market tons				365
" 1826,	"	"	"	48,115
" 1836,	"	"	"	696,526
" 1839,	"	"	"	836,000
" 1842, we have no returns, but taking the increase at nearly the same rate it would produce upwards of				1,000 000

The amount of indigenous bituminous coal consumed East of the Alleganies is comparatively small, though the states of Pennsylvania, Maryland, and Virginia abound with this fossil of excellent quality and inexhaustible in quantity. On the seaboard we have been hitherto indebted to importations from England, Scotland, and Pictou, in the Gulf of St. Lawrence. Our importations of this foreign coal have averaged 150,000 tons for many years. That imported from England is brought in as ballast, and is delivered on board ship in the harbor of Liverpool at 6d sterling per bushel, and is now selling in New York, Philadelphia and Baltimore, at from $6,50 to $8,00 per chaldron of 32 bushels, or about 30 cents per bushel. During the last session of Congress an act was passed laying a duty of $1,75 per ton on foreign coal, which of itself amounts to a prohibition; and simultaneously, Mr. Peel obtained the passage of an act by the British Parliament, imposing an export duty upon coal, thus completely closing the door against competition from that quarter, and bringing our own bituminous into immediate demand in the cities and towns upon the seaboard, and increasing the consumption of the more inflammable descriptions of the Anthracite for grates, from the mines of Bear and Lykens' Valleies.

The ostensible motive of Mr. Peel was to raise a revenue, upon the export, of 200,000£ sterling, per annum, but those who appear to understand the real governing principle do not hesitate to assert, that the act is founded on the dread of exhaustion! That in England, Ireland and Scotland, since the turf and peat-bogs can no longer supply fuel, the consumption of coal has increased to 35 millions of tons per annum, and the export to 2 millions. It is certain, that any material diminution of the supply of Coal in England, will be the signal of the prostration of the British manufacturing system, of British industry and British supremacy.

France has for years depended upon England for a partial supply of coal. Many begin to indulge an opinion that the day is not far distant when our outward bound ships from the Chesapeake will ballast with anthracite for Havre de Grace, at the mouth of the Seine, and that Paris will be tributary to Pennsylvania for coal.

8. I may be excused, before closing this long statement, for making an earnest appeal to the interest and patriotism of my fellow citizens of Pennsylvania and Maryland in favor of the great work we are about to commence. I call upon them to put their shoulders to the wheel, and, even in these times of scarcity and pressure, to come forward and subscribe their mite to this most important work. The stock is but 20 dollars per share, and there are thousands of families that would save that amount in the difference of the price of coal in one year.

9. In the calculation of tolls that would accrue to the Pennsylvania canal from the increased transportation of coal, owing to the great reduction in the cost of the article, the proprietors of the Susquehanna and Tide Water Canals are deeply interested. We do not, we think, say too much, when we declare, that the tolls of the first year's transportation of Bear and Lykens' valley coal upon that canal will produce $20,000 independent of the immense quantities of lime and limestone, that will be boated down to make the poor lands of Cecil, Harford, Baltimore, &c. rich, and will go on increasing yearly, with the increased consumption; and beyond this we may predict, that the ports of Havre de Grace and Baltimore will experience an immediate corresponding increase of trade.

10. I close with observing, that return cargoes and passenger freight, by the rail road cars, and the transportation of white oak, which is abundant on the line of the road, for ship timber and cooper stuff, and of iron manufactured, have not been taken into account, and which will produce a considerable addition to the revenue.

All that I ask of my fellow-citizens, is a careful perusal and candid examination of the whole statement, which is finally closed and confidently submitted, by

H. M.

viction of such previous offenders. We think it might be useful for the agents and keepers to turns and descriptions of the prisoners commit- e clerks of the several counties.

alluded to, as rendered expedient by our vicin- a treaty should be made with Great Britain for lers against the laws, either of this state or of submit, that it might be proper, should the Le- that application be made through the proper United States, on this subject; and that the villingness of this state, so far as the rights and te are concerned, that reciprocal arrangements into.

dy made, it has appeared, that with respect to cipline and government of the Auburn prison, d solitary confinement in a cell, unites most of ommended in a state prison. Time and expe- rovements in matters of detail; but we do not perfect, than the general system of that prison, be reasonably looked for. We therefore unan- , our respectful opinion, that the system of dis- use in the Auburn prison, should be continued soners; and that the same should be extended as the construction of that prison will allow them

nement remains for consideration; and on this egislature, that while we have felt for each oth- spect, there is not a perfect coincidence in the his subject; and we are desirous to present to ation of the subject as it has appeared to each

ng our number, is influenced much by the con- rs since the Legislature introduced the system ct on the subject was passed with much consid- by the opinion of many men of the greatest in- ut of the Legislature, who expected the most object was to increase the severity of the pub- come so much exposed to the contempt of the ve a lesson to old offenders, which should induce The hope was not abandoned, that solitude ng the morals of some, by leading to reflection, o sincere repentance. When therefore, this law operation, it is alleged, that to repeal that law ibit our Legislature as capricious, and leave a shment and of reformation without a sufficient

also submitted as further explaining the opinion olitary confinement; and that the matters of fact rence.

litude, amounting to thirty-six, have been sepa- and a minute made of their criminal history; the number of times they have been imprisoned and pardoned; the sentence of the court and the time expired at the date of their pardon; the length of time they were at large before the second or third offence; the time they served in pris-

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Additional Remarks.

Burden cars constructed to carry 9 tons each, as recommended in the engineer's report, is something new on our roads. I presume they will be constructed on the 6 wheel principle, the two wheels which support the centre of the car, to be without flanches—but whether with or without there will be no danger of being thrown off, or biting the flanch of the centre wheels, on a curve of two thousand feet radius. Cars constructed with 6 wheels may have a division in the bed immediately in the centre, by which the coal may be tilted out at the extreme ends, and falling through between the rails into shutes, will slide immediately into the boat, or should there be no receiving boat convenient, will be stopped at the lip, or depressed end of the shute, by a vertical breast board, under which lip the receiving boat, when ready to take in cargo, will be towed, the breast-board let down upon its hinges, or lifted out of its grooves, as the method of securing may be, and all the coal lying in the shute, will slide into the boat. In this case 81 tons, the lading of 9 cars, will be the cargo for one boat; the whole matter will thus be so systematized, that there will be no weighing except on the rail-road scales, and the boats will each receive a certain number of tons as delivered in the shutes.

In all matters in which numerous hands must be employed, due attention ought be paid to economy in every department. Inattention to this principle, in the business of mining coal on a great scale, throws a portion of the loss, if not the whole, upon the consumers.

The amount yet to be subscribed to the capital stock of the company is about $150,000, the whole amount is $300,000. It is expected to commence the work early in spring, so as to have the road and canal open for business in the month of August next; in that case 50,000 tons of coal will descend the Susquehanna canals during the fall months of 1843. Should our expectations of the subscription to the stock be realized, from 5 to 600 men will receive employ upon the road, independent of those that will be employed in the mines, already opened, and in opening others on the estates of a number of companies and individuals, lying convenient to the rail road. This in these times, when so many are suffering for want of employ, will be an additional motive with the humane and enterprizing to give their aid to forward the work.

It will be perceived we have counted upon no coal freight but that mined at Roush Creek Gap: But a very considerable accession will flow in from the lands bordering on the road 12 miles from the Gap to the western termination of the coal mountain, where again the cars from the Lykens' valley works will enter the road, paying toll for ten miles. The additional transportation from these points will amount to from 50 100,000 tons per annum, still swelling the profits of the stockholders.

One word before parting relative to our own Conestoga. It is not generally known that extensive banks of Iron Ore, of superior quality, are found convenient to the slackwater navigation between Lancaster and Safeharbour, principally on the South side of the stream; nor is it generally known that an iron Master, Mr. Gilford, applied to the late Edward Coleman, Esq., for the water power of one of his dams, with a view to building a furnace to make iron with anthracite coal. The matter was then postponed, principally we believe, on account of the expense of wagoning the ore from Gamber's hill to the proposed site of the furnace, not being aware that there was an abundance of ore, which has been proved of the best quality, convenient to all the dams upon the navigation. A very great portion of this valuable water power is yet unoccupied, and now that our own iron is protected by a duty upon the foreign, that coal of an excellent quality can be obtained at about one half what it cost at that time, and that ore is convenient to the creek and plenty, it is not unreasonable to expect that so fine a water power will remain much longer unemployed. All that has been said with regard to coal, iron, lime, &c., bears forcibly upon the interests and prosperity of Lancaster county, and the city of Lancaster in particular. H. M.

IRON ORES
Of the Bear Valley Coal Basin.

BY IRA SPAULDING, C. E.

BLACK BAND.

Since the commencement of operations on the Bear Mountain Railroad, there have been opened, at Rausch Gap, several large veins of iron ore of great value, and the excellence of these ores, their very favorable position for mining; and the cheapness of fuel, will render this one of the most desirable locations in the State for the manufacture of iron.

Among the varieties of iron ore found here, is the *black band iron-stone*, similar to the black band so favorably known in the coal regions of Scotland and Wales. This ore has very much the appearanee of coal-slate, and is found in regular strata lying above coal veins, with a few inches of intervening slate.

This black band ore was first discovered in 1801, near the river Calder, in the parish of Old Monkland, in Scotland, by Mr. David Mushet, from whom it takes the name of Mushet Stone. In the preface to his papers on iron and steel, published in 1840, Mr. Mushet says that at the time he discovered the black band iron-stone, "great prejudice was excited against him by the iron masters and others of that day, for presuming to class the *wild* coals of the country with iron stones fit and proper for the blast furnace. Yet that discovery has elevated Scotland to a considerable rank among the iron making nations of Europe—with resources still in store that may be considered inexhaustible."

The following extracts from Mr. Mushet's papers, will be found interesting, as a description of the valuable properties of this iron-stone, and the extraordinary prosperity of the iron manufactures of Scotland, consequent upon its discovery.

"This anticipation in the text has been singularly realized; and in the discovery of what is now called the Black Band Iron-Stone, an entirely new class of iron-stone, to which I have given the name "Carboniferous," has been introduced to the iron trade and to the mineralogist. Others have termed it bituminous; but this designation is not, as far as I have seen or known, at all appropriate. In fact, all iron stones of this kind, that have hitherto come under my notice, may be considered as a species of coal, which, when exposed to combustion, yields a greater or lesser quantity of smoke and flame, leaving behind what may properly be named a metallic coke. The different beds generally contain a sufficient quantity of carboniferous matter to torrefy the stone, and make it fit for the furnace. Most of the beds possess a top measure which is more carboniferous than the lower measures—more resembles a carboniferous schist—and in proportion as it contains volatile matter resolvable into flame, so is its per centage of iron reduced. The fracture of the lower part of the bed generally presents grey and black layers alternating; and at no time, unless when in contact with trap, does the black band possess a specific gravity equal to that of the common class of argillaceous iron-stones.

The appearance of this iron-stone resembles that of a heavy parrot or cannel coal. It comes away in two beds, the upper about four inches thick; the lower, and more solid and dense part, ten inches. It lifts in lengthened oblong squares, stretching out like a pavement, and sometimes in triangular masses. Its fracture is grey-black, striped with whitish-colored laminae.

For several years after its discovery, the use of this iron-stone was confined to the Calder iron works, erected by me in the years 1800, 1801 and 1802, where it was employed in mixture with other iron stones of the argillaceous class. It was afterwards used in mixture at the Clyde iron works, and, I believe no where else; there existing on the part of the iron trade a strong feeling of prejudice against it. About the year 1825, the Monkland Company were the first to use it alone, and without any other mixture than the necessary quantity of limestone for a flux. The success of this company soon gave rise to the Gartsherry and Dandyvan furnaces, in the midst of which progress, came the use of raw pit coal and hot blast—the latter, one of the greatest discoveries in metallurgy of the present age, and above every other process, admirably adapted for smelting the Black Band iron-stone.

The greatest produce in iron per furnace with the Black Band and cold blast, never exceeded 60 tons a week. The produce per furnace now averages 90 tons a week. Ten tons of this increase I attribute to the use of raw pit coal, and the other twenty tons to the use of hot blast.—With raw pit coal less blast is required to produce the same quantity of iron; or, in other words, the same quantity of blast will produce a larger quantity of iron, even where cold blast is employed. This arises, not from the greater quantity of iron mine which the raw coal is found to smelt, but from the greater solubility of the coal before the blast, driving *more charges*—as it is technically called—and increasing the quantity of pig iron made in a given time, by increasing the consumption of iron-making materials. The ratio of increase with cold blast and raw pit coal, may be considered equal to about 25 per cent. The increased quantity of iron produced by the hot blast is not owing to any material increase in the consumption of coal, but to the circumstance that the hot blast renders the coal capable of smelting and carbonising a much greater quantity of iron ore. The quantity of pig iron will, therefore, depend on the rate of driving, and the weight of iron-stone apportioned to the fuel. The weight of driving will depend on three things, namely, the quantity and strength of the blast, the solubility of the coal, and the fusibility of the iron stone. The fusibility of the latter will depend partly on the nature and proportion of the earths they contain, and partly on the quantity of limestone required to promote fusion, and form a cinder sufficiently divided to allow the descending iron to penetrate into the hearth of the furnace. Whenever the earths exist in quantity, and are of a refractory nature, a great deal of limestone is required; as much, sometimes, as 1½ tons to a ton of pig iron; and with roasted argillaceous ores, not less than one-third the weight of the iron-stone of limestone is employed. With the carboniferous iron-stone, the proportion of earth in which seldom exceeds 5 or 6 per cent., only a small addition of lime is required to neutralize the earthy matter, and since the hot blast system has done away with the necessity of having a flow of cinder for the protection of the iron; considerably greater than the quantity of the iron itself, ores of the richest quality may now be safely smelted. Instead of 20, 25, or 30 cwt. of limestone formerly used to make a ton of iron, the black band now requires only 6, 7, or 8 cwt. to the production of a ton. This arises from the extreme richness of the ore when roasted, and from the small quantity of earthy matter it contains, which renders the operation of smelting the black band with hot blast, more like the melting of iron than the smelting of an ore. When properly roasted, its richness ranges from 60 to 70 per cent., so that little more than a ton and a half is required to make a ton of pig iron, and as 1 ton of coal will smelt 1 ton of roasted ore, it is evident that when the black band is used alone, 35 cwt. of raw coal will suffice to the production of 1 ton of good grey pig iron.

The following list exhibits the number of blast furnaces now at work in the parish of Old Monklands, smelting the Black Band alone, to the exclusion of any other iron stones, and averaging about 90 tons each per week.

Monkland,	3
Calder Bank,	2
Calder,	6
Dandyvan,	5
Carnbræ,	2
Gartsherry,	8
Sommerlee,	4
Total,	30 furnaces.

Besides these thirty furnaces, there are four at Clyde and two at Govan which use the Black Band in mixture with about half its weight of common clay iron stone. It may therefore be reckoned that there are in the neighborhood of Glasgow, thirty-three blast furnaces working upon this valuable iron stone, making weekly about 3,000 tons of pig iron, consuming weekly about 9,000 tons of raw ore, less than an equal number of tons of coal, and 1,000 tons of limestone. According to the old mode of calculating, which allowed ten tons of materials to make one ton of pig iron; it would have required 30,000 tons of coal, iron-stone, and limestone to produce the

above-mentioned weekly quantity of iron. The production is now effected with 19,000 tons, making a saving of 11,000 tons, a week or upwards of 3½ tons of materials in the manufacture of each ton of pig iron.

After an absence of many years, I visited Scotland this summer, and in addition to the existing active state of the trade in the Monkland parish, arising out of the discovery of the black band, I found considerable preparations making for a further extension of the manufacture of pig iron.

At Gartsherry, preparations are making to erect		6 furnaces.
At Dandyvan,	do	3 or 4 do
At Calder,	do	1 do
At Calder Bank,	do	1 do
At Govan,	do	2 do
Total,		13 do

This prosperous state of affairs not only abundantly enriches the iron masters who are in possession of the carboniferous iron stone, but has raised in an unprecedented manner the value of the mineral property in the neighborhood of the furnaces. The estate of Airdrie, for instance, now returns to the proprietor, for royalty on the black band discovered by me in 1801, £12,000 a year; whereas, formerly, not one shilling of mineral rent was obtained. Large revenues are also derived from the Cairnhill, Lanchosse, Woodhall, and other estates, all originating in the same source.

The lordships payable upon the raw iron-stone, are from sixpence to four shillings and three pence per ton; but the rent is generally taken upon the roasted stone, which is calcined at the pit's mouth, and which, owing to the carboniferous matter got rid of in the operation, is reduced to half its original weight; thus materially reducing the cost of carriage on a ton of pig iron.

The inflammable nature of the stone is such, that little or no addition of fuel is requisite to calcine it. The lordships payable on the roasted stone are from four shillings to eight shillings and sixpence per ton long weight. A blast furnace with hot blast, which would make from the common argillaceous ore 60 tons of pig iron a week, would, with the carboniferous iron stone alone, manufacture from 80 to 90 tons.

Statement of burden carried and produce of one furnace, for one week, blowing with coals, *Black Band alone*, and heated air, at the Clyde Iron Works.

No. of charges.	Coals.	Calcined Iron Stone.	Limestone.	Produce.
451	Tons. cwt. qrs. 112 15 0	Tons. cwt. qrs. 121 9 2	Tons. cwt. qrs. 30 1 3	Tons. cwt. qrs. 52 2 2

Coals used to the ton of iron, Calcined iron stone, - - - - - Tons. cwt. qrs.
Limestone, - - - - - 2 3 2
2 6 3
11 2

Statement of burden carried and produce of one furnace, for one week, blowing with coals, clay iron stone, and heated air, at the Clyde Iron Works.

No. of charges.	Coals.	Calcined Iron Stone.	Limestone.	Produce.
418	Tons. cwt. qrs. 104 10 0	Tons. cwt. qrs. 125 8 0	Tons. cwt. qrs. 13 17 3	Tons. cwt. qrs. 73 6 2

Coals used to the ton of iron, - - - - - Tons. cwt. qrs.
Calcined iron stone, - - - - - 1 8 3
Limestone, - - - - - 1 14 1
0 3 3

Saving arising from the use of black band iron-stone:

	Tons.	Cwt.	Qrs.
Coals per ton of iron.	0	15	3
Limestone,	0	7	3
Additional produce in iron per wk.	20	4	0

According to the preceding statements of Mr. Mushet, a furnace using the Scotch black band ore, will produce about 40 per cent. more iron than a similar furnace using the other ores of the country, and this too, with 35 per cent. less ore, 53 per cent less coal, and over 100 per cent less limestone for each ton of iron, than is required for each ton of iron produced from other ores. Allowing the cost of the raw materials in Scotland to be about the same as the average prices paid at the Pennsylvania furnaces, the cost of supplying the iron making materials to the furnace using the black band ore, would be about $21 per week less than if other iron-stones were used. Here we have 20 1-5 tons more of iron per week for a less expenditure by $21, and supposing the pig iron to be worth $25 per ton at the furnace, the value of the products of the furnace using black band, would be $505 per week more than if using other iron-stones, or a weekly balance of $526 in favor of the black-band ore. It requires, with the exception of limestone—about the same amount of iron making materials to make one ton of iron from the Pennsylvania ores generally, as from the argillaceous iron stones of Scotland. The amount of limestone required is about the same as is used for the Scotch black band.

Several veins of argillaceous ore have also been opened at Rausch Gap, yielding from 45 to 49 per cent. metallic iron, and lying in excellent position for mining. Some of these veins will average over 12 feet in thickness. The vastly increased profits to the manufacturers, however, resulting from the use of the black band, the superior quality of the iron, and the peculiar adaptation of this ore to the use of anthracite coal, will doubtless give the black band the precedence of all other ores for the manufacture of iron in the anthracite districts.

Below is given the analysis of the black band iron stone, from Rausch Gap, as analysed by Professors Booth and Boye, eminent chemists of Philadelphia, and also of three specimens of black band analysed by Dr. Colquhoun, of Glasgow.—The great similarity between the American and the Scotch black band, not only in their component parts, but in their position and appearance, is truly remarkable.

AMERICAN BLACK BAND

From Rausch Gap, Schuykill county.

Protoxide of iron	50.63
Carbonic acid and water	31.36
Silica	10.00
Carbon	6.75
Alumina	.14
Lime	.22
Magnesia	.90
	100.Parts.

Contains when roasted 57.89 per cent metallic iron.

SCOTCH BLACK BAND,

No. 1, from Carin-hill, being the measure connected with the Ell coal, and the first that was discovered.

Protoxide of iron	40.77
Carbonic acid	26.41
Clay	10.00
Coaly matter	17.38
Lime	.90
Magnesia	.72
Iron pyrites	2.72
Water	1.00
	100.Parts.

No. 2, from the neighborhood of Airdree.

Protoxide of iron	53.03
Carbonic acid	35.17
Lime	3.33
Magnesia	1.77
Silica	1.40
Alumina	0.63
Peroxide of iron	0.23
Calcareous or bituminous matter	3.03
Moisture and loss	1.41
	100.Parts.

No. 3, from the Parish of Cadder.

Protoxide of iron	53.82
Carbonic acid	34.39
Lime	1 51
Magnesia	0.28
Silica	2.00
Coaly matter	7.77
Iron Pyrites	0.23
	100.Parts.

bject. A person of strong constitution will

[From the Scientific American.]

Coal in the United States.

We have in recent articles called attention to the quantity and quality of the iron and copper within the territory of the United States, and wish now briefly to refer to the supplies of fossiliferous fuel.

At a general glance of a map of the coal fields, the whole triangular basin enclosed between the Alleghanies on the east, the great plains of the far West, and the highlands of Upper Canada on the north is one vast coal field. On closer inspection this may be divided into two, the great Pennsylvania field, covering almost the whole of that State, and stretching down to the centre of Alabama and the Illinois coal field, which, with more or less interruption, extends from near the northern portion of Michigan into the northern portion of Arkansas. The immense partially-explored regions of the West have revealed coal at several points, and a study of the surveys for the Pacific Railroad has brought to our knowledge the existence of coal at many additional points, one of which is at or near the northernmost bend in the Missouri.

Nearly all the coal under the immense area alluded to is bituminous coal. Anthracite, most used in Eastern cities, comes from a number of small fields lying out of the main field on the east, as shown by several slight patches near Philadelphia. There is what is termed by geologists the Rhode Island coal field, extending as represented, into Massachusetts; but although science shows the substance then procured to be actually coal, it possesses one important defect—it will not burn.

We cannot attempt, in a brief space, to explain the causes which are supposed to have produced the great deposits of valuable fuel which we find beneath the earth's surface, further than to remark that it is demonstrated to be wood, preserved from decay by an air-tight covering of earth, which has been converted into its present condition by the action of time, pressure, or heat, or of all combined. The eastern outskirts of the Pennsylvania field has been more fully roasted, or coked, and reduced to anthracite, while the Rhode Island field has been so intensely burned as to reduce it almost or quite to cinder.

The coal which is revealed in the great Rocky Mountain region, although it may furnish liberal supplies at some points for hundreds of years, it cannot possibly belong to any such great beds as those in the settled portions of the States. The area of the coal beds proper is estimated by Prof. Rogers at 200,000 square miles. This is believed to be far greater than the area of all the coal fields of Europe, and somewhat larger than those of the whole of Europe, Asia and Africa. It is useless to attempt to calculate how long this supply of coal will last, as the consumption is increasing every year with the increase of steam power; but the fields of anthracite alone could supply the world for a very long period before it would be necessary to touch upon the margins of the great fields. Great Britain has a far nearer prospect of exhausting her supply. We now mine only 9,000,000 tons annually. Great Britain mines (and burns or sends abroad) 65,000,000 tons each year. If the consumption continues to increase at its present rate, the fields now most worked in Great Britain will be exhausted in about 300 years, and her whole supply in about 2000 years more.

Layers of coal vary in thickness from little exceeding that of a sheet of paper up to fourteen feet or more in thickness. The coal fields here represented generally include thick valuable layers, and the greater part contains a considerable number of strata of coal, several of which are workable, with common earth and rock between them.

The number of strata decrease westward. According to a late paper by Prof. Rogers, the number of coal seams in Nova Scotia is about fifty, though only five of them are of workable thickness, being equivalent to about twenty feet of coal. The deepest anthracite basin of Pennsylvania, that of the Schuylkill, contains also about fifty coal seams, and twenty-five of these have a thickness each of more than three feet, and are available for mining. Further west, the great Appalachian, or, as we have here termed it, the Pennsylvania coal field, contains about twenty beds in all, ten of which are thick enough to be mined. Still further onward the broad basin of Indiana and Illinois shows apparently not more than ten to twelve beds, and it is believed that only seven of these are thick enough and pure enough for mining. Northward, in the Michigan coal field, there are only two or three layers, and these lie so low that the expense of draining mines by pumping will long forbid successful coal mining in that locality. Still further westward, the coal field of Iowa and Missouri contains, it is believed, but three or four beds of workable size, and the total number, thick and thin, does not exceed six or seven. A similar gradation is noticeable in the general size of the individual coal seams, by far the thickest being in the anthracite basins of Eastern Pennsylvania. The coal in the Western territories is generally thin.

THE PENNSYLVANIA CORNWALL MINES.—These immense mines of iron ore, located in Lebanon county, on the line of the Lebanon Valley Railroad, about twenty five miles from Harrisburg, are one of the wonders of the world. To the proprietor, Mr. Coleman, they are an inexhaustible source of wealth. As the Lebanon Road just opened from Reading, conveys one to the spot, it will be seen by the annexed sketch of the Mines, that to the man of science, the geologist, and even the casual visitor, an inspection of them would prove most interesting:—

"There appear to be three conical mounds, heaved up from two to three hundred feet above the level of the plain, and covering an area of about ninety acres, the entire contents of which is a mass of the purest and best iron ore in Pennsylvania. There is no removing super incumbent earth, and sifting and sorting ore here, and no *miners* required. The whole hill is cut down in benches, as contractors would remove gravel for an embankment, and every pound dug is iron ore, that neither requires roasting or preparation before going into the furnace. These mines have been worked one hundred years, and they look as they might last for a thousand more.

"We learned that Mr. Worrell, a competent engineer, has made a measurement of the mines, from which he estimates them to contain *forty millions of tons of ore* above the water level; and it is quite probable that there is twice as much below the water level. According to this estimate, here is a single tract of land occupying the room of an ordinary Pennsylvania farm, that would pay the whole debt of the State and leave a large surplus.

"This ore is now being sold and worked up at the rate of about four hundred tons per day, and when the Lebanon Valley Railroad is built, two thousand tons a day of it can be sold. All that is now taken away has to be hauled in wagons over a plank road five miles to the Union canal. When the Railroad is finished tracks can be built into the pits, and the ore shovelled into the cars from the banks, and these mounds will furnish trade for a railroad for a hundred years to come. What a magnificent estate—what an invaluable deposit is here, being enough to make iron for ten railroad tracks round the entire world, including sea and land!"

PITTSBURG COAL TRADE.—The Pittsburg *Gazette* gives the following particulars in regard to the bituminous coal trade of that city for the present year:

The coal trade was, perhaps, never better than it has been at this year, at least, if we consider the amount that has gone to market. The experience of last winter's fuel famine in Cincinnati and other cities on the Ohio Valley, has taught the citizens of those places a lesson of providence and they have profited by it. The trade which opened so briskly with the opening of the river, has not flagged greatly. The ruling price is now from ten to eleven cents, we are informed in Cincinnati. As may be seen by the subjoined figures, our people have not been idle this year.—The aggregate shipped from this city for the months of February and March in bushels:

	8,514,717
April,	3,048,826
May,	3,927,742
June,	2,986,164
Total,	18'477,519

This includes only what passed through the locks on the Monongahela. During the uncommon June rise, a large number of boats passed over the dams and there are constantly boats loading opposite and below the city no account of whose loads can be obtained. A low estimate for the season so far would be probably two and a half millions of bushels. This would make for the season twenty-one millions of bushels, which we judge is not far from correct."

For such subjects, the solitary cells may should be kept, to the end of their term of produce habits of submission and order: of which include all or any large proportion of the subjects of the prison. His constitution, and all his bodily and mental faculties, may indeed be broken down by it; he can, no doubt, be made a fit subject for the poor-house, or hurried to his grave, by this mode of punishment, and he might be brought to the latter also, by much shorter and less expensive methods. But no valuable purpose, it is firmly believed, can be effected by it, contravailing the great expense and unavoidable loss of labor consequent upon

this mode of punishment. All the objects of government are accomplished, by that degree and mode of punishment, which shall the most effectually prevent the farther commission of crimes, either by deterring the vicious, by the severity of punishments, or by secluding the subjects of crime within the walls of a prison, or by transportation to some distant colony, where the farther commission of crime becomes nearly impracticable, and the contaminating influence of evil practices, can not affect the community.

This consideration in countries where every mode of more sanguinary punishment had been practised for ages, and had failed of preventing the commission of crime, no doubt led to the policy of confinement with labor. The Hollanders were among the earliest, perhaps they were the first, to carry this plan of punishment into full effect. As early as 1770, it was in full operation in their rasp houses, and was about the same time, or soon after, introduced into several other European countries. Confinement, with labor, upon the same plan, varying only in some minor particulars, has been adopted in this country, commencing in Philadelphia, and extending through most of the states. It will probably be continued in this state, as better comporting with the genius of a mild and benificent government, anxious to prevent the commission of crimes, by the mildest possible means, and to exalt the community to a state of the most enviable civil prosperity.

Upon this branch of the subject, it may only remain for the one of us who maintains this opinion, to express his most decided preference in favor of confinement with labor, under a suitable course of discipline, (with the exception before remarked, where the solitary cell may be resorted to,) as being at least as effectual in displacing the evil propensities of the convict, and much more effectual in reclaiming him to habits of sobriety, industry and usefulness; and as possessing, moreover, this farther advantage, of enabling the convict, while in prison, to contribute somewhat, if not in whole, towards defraying the expense of his support, and thereby relieving the state from the heavy and discouraging expense to which it would, by the other mode, be subjected, by the confinement of such a large number of persons, without labor, in solitary cells. This commissioner has farther no hesitation in expressing his conviction, that if any course of measures, or mode of punishment and discipline, within the reasonable means of government, and short of the miraculous interposition of divine grace, is capable of reclaiming the offender from the evil of his ways, and of improving his condition for usefulness, that a course of prison discipline, with labor, as at present in full operation at the Auburn prison, under the superintendence of its capable and devoted agent and keeper, Mr. Lynds, must produce that effect.

This commissioner concurs with his colleagues, in the opinion, that a plan of transportation to some foreign colony, to be provided and maintained for the reception of convicts, ought not to be attempted, for these considerations, if there were no other, that it must prove a source of great and incalculable expense, certainly far greater, and probably not as efficient as may be provided at home.

The commissioner who holds this opinion, remarks farther, (in which remarks the majority of us concur,) that while it is conceded on one hand, that the peace and moral character of the community would be greatly improved by a perfect separation of the criminal from the virtuous population, it must be allowed on the other, that to make that separation, by transportation or by death, except for the highest crimes, is opposed by many strong considerations. But it is believed, that a criminal colony may be established at home, and governed and maintained without much expense or inconvenience. This may be done by a new state prison, upon a site and a plan sufficiently capacious to hold all the convicts at present at New-York, with all future accumulations. By building the prison on a marble quarry, as contemplated, on the margin of

remakrs last week caused fluttering in some -hut they have met the general appro- the trade both at home and abroad en- in mining Coal. An entiro change must ake place in the trade, since the competition has become so great by the opening of new regions, and the extension of facilities for carrying Coal from these regions. The great difficulty in Schuylkill County is the difference in freight from Port Richmond to the East, and from Elizabethport near New York, and from Rondout and Port Ewen on the North River, amounting to from 60 to 75 cents a ton. The increased trade from these ports is already drawing Colliers from Port Richmond and Philadelphia, making them scarce at the latter places. The difference in freights enables these companies to sell their Coal a shade higher, and it is still furnished to the East lower than from Philadelphia. Our Coal is generally preferred in New England, and the great bulk has heretofore been derived from Schuylkill County, but the difference in price is gradually driving it out. A letter received during the week from an intelligent dealer in New England, to whom we had written for information, states, (rather to our surprise, as we had been led to believe differently,) that more Coal has been received in New England up to the first of July this year than to July 1, 1856—*but less from Schuylkill County.* He gives the receipts at

Boston to July 1, 1857, at	95,213 tons.
" " " " 1856, "	84,997 "
Excess in 1857,	10,216 "

With an arrival on the 10th of July of about 18,000 tons in one day. He also states that in Connecticut and some parts of Rhode Island, Schuylkill Coal is almost discarded—it finds the *credit customers* awaiting its calls, but the *good cash customers* go to Elizabethport and the North River. The Agencies of the Companies shipping from these ports, are in the hands of industrious and vigilent men, who are bound to sell.

If the "middle interest" at Port Richmond had not defeated the Coal Operators in Schuylkill County, who agreed to fix the prices on board at $3 85 @ 3 95, by offering Coal at $3 65 higher, prices would have been maintained at Rondout, Port Ewen and Elizabethport,—*but these offers forced their prices down below a fair paying point,* and the Miners and Operators are suffering in all the Regions, and the whole Anthracite trade is prostrate—equally as much so in the Wilkesbarre and Lehigh Regions, as in the Schuylkill Region. The only exception is that of the Delaware and Hudson Company, which mines in the upper section of the Wilkesbarre Region at Honesdale—and they derive a large profit in the shape of tolls in carrying the Pennsylvania Coal Company's Coal. This pays better than selling Coal at present prices, and they are diminishing their business in proportion, and husbanding their Coal, which, under the circumstances, is the wisest policy they could adopt. The "middle interest" therefore at Port Richmond, while they may lay claim to the sympathy of that class of consumers who think it is their interest to buy Coal at less than the cost of production, has reduced our business, crippled the producer and carrier, and the man who invested in Coal property, under the expectation of receiving a quick return for his money. *They sold the Coal of the Operator below the cost of production, even before they purchased it—forstalled the market and drove him out, and then by means of their large capital (which has been built up out of the profits of the poor Coal Operators,) and long credits, compelled him to sell them their Coal at ruinous rates, and on their own terms.*

As we stated last week, this policy was adopted to defeat the organization of the different Coal interests, with Mr. Tucker at its head. They know that the Coal Operators are beginning to understand their own interests, from the great experience they have derived from the mining business, and if they can by any means secure a profit on the business, they will be careful not to suffer themselves to be placed again so completely at the mercy of this interest.

This is the state of the trade—it looks gloomy for Schuylkill County, and also for the Railroad, and we would therefore take the liberty of suggesting the only remedy that in our opinion, would be prudent to apply this season. We make the suggestion with all due defference to those who control the carrying companies.

The producer without shipping facilities, and the Railroad Company, are the greatest sufferers—the Canal has more Coal offered than she can accommodate—(because the middle interest or purchasers of Coal at Port Richmond have become so odious in this region, that not a ton of Coal will be sold to go to Port Richmond by any operator, if he can get any other outlet)—the Canal Company allowed a drawback of ten cents a ton last year to the receiver of Coal—this year they allow 10 cents per ton to the operator—and we were informed by a dealer in Coal a few days ago, that those who mine and sell their own Coal, have additional facilities by Canal over the Railroad. They ship the Coal to themselves—and they give full weight, and from 2 to 3 per cent. over, on which no toll, and in some instances no freight is paid Those who buy the Coal barely get weight, and in many instances it falls short, because the seller here cannot afford to give more than weight to the purchaser. This, it is said, the Navigation Company winks at—and this per centage pays at least half and in some instances the whole of the shipping expenses of transferring the Coal from boats to vessels at Philadelphia for Eastern ports, and has enticed many of those who mine their Coal and have wharves at Richmond, to transfer a portion of their business to the Canal. It will not do to reduce the price of toll and transportation at this late period on the Railroad without injustice to those who have laid in their stocks. The Companies abroad, if they reduce their prices during the season, make a reduction on all the Coal sold previously, which is correct—but from the very nature of the business in Schuylkill Co., this could not be done. The only remedy then for the present state of affairs, is for the Railroad Company to allow a drawback to the producer in Schuylkill county, equal to the advantages the Canal possesses over the Railroad, taking into consideration the quantity of capital required &c. This would equalize the trade between the two Companies—relieve the poor Coal operator, who is forced to sell to the middle interest, without affecting the trade abroad, or interfering with those who have laid in their stock of Coal already, and at the same time encourage the producing interest. If the producer here then gives the whole advantage of the drawback to the purchaser below, and thus deprives himself of it—we know of no remedy for him—he is evidently unqualified, cannot exercise *any* control over his business, and must be ruined in the end—and the sooner he is driven out the better for the trade. In the meantime keep up the Coal Organization—it has met with difficulties this season it is true—and has failed to accomplish all that was expected. It has however, saved a portion of the trade, and kept up the prices of all the first quality Coal at least from 10 to 15 cents per ton. It has satisfied all the different interests that nothing but the determined efforts of the "middle interest" in reducing the prices at the start at Port Richmond, has prevented it complishing all that was expected for it. Next year their will be no difficulty in uniting all the different interests in measures that will secure a remunerating rate to all parties interested. The experience of this year has shown the necessity of such an organization more than ever—and both the Canal and Rail Road Companies will be

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compelled to unite with the trade here, for the *preservation of their own trade.* In the new arrangements another year, the Rail Road *will have her portion of the trade,*) if she cannot obtain it this year under the present arrangements,—and the stockholders will take hold of the Managers of these Companies that continue to hold back, or are endeavoring to thwart the effort of the producer, in trying to obtain a fair remunerating price for his Coal.—We understand that there will be a determined effort to change the present management of the Schuylkill Navigation Company next winter, on the ground of inefficiency. A portion of the trade at Port Richmond, particularly the "middle interest," who have lost "the dumpage" and other favors, are determined to have Mr. Cullen removed from the Presidency of the Railroad if they can—and they are backed by all the *Irish Catholic interest* in Schuylkill county and elsewhere, because Mr. C. happened to be born in England. And we learn from abroad that the stockholders of the Pennsylvania Coal Company are anything but satisfied with the policy adopted by that Company the past season in putting down the prices of Coal below what they might have received.—The Lehigh Company will also find out ere long that her true policy will be to charge a little higher for her Coal, and reduce the tolls on her canal—instead of charging *too high tolls* to individual operators and selling her own Coal *too low*, thus attempting to fleece and destroy the operators who give her the bulk of her revenue, or drive them off to a rival avenue for the transportation of their product to market.

THE writer of the following we presume, from its tenor, has some Coal lands for sale. Without questioning in the least, the truth of his statements, we can say, his proposition comes too late. Our Operators have been so reduced by antagonistical interests, that they are now utterly unable to purchase land or make improvements. In the future, if the trade of this Region is to be sustained, and it is the interests of land-owners that it should be, those land-owners will be compelled to make the needed improvements, where some considerable cost will have to be experienced. Then the Operator will be enabled to devote his means to the successful prosecution of his business, and avoid contact with the middle interest, which up to this time has been the most serious evil with which the trade has had to contend. As regards the Coal from that Region, the writer is mistaken in stating that it commands a higher price than Schuylkill Coal. Our Coal commands a price equal to that sent from any other Region of Pennsylvania. "Luzerne" says:

WILKESBARRE. July 20th. 1857.

MESSRS. EDS:—I perceive from your columns, that the Operators in your county are suffering in their business from various causes, such as Middle interests, Shylocks, &c. Look back on their history for the last thirty years, before those interests had an existence, and see how many martyrs there have been in the trade, some of whose histories are short. They went into the business with flattering prospects, capital of their own and friends ready to assist them. After expending their capital, and taxing their friends beyond prudence; encountering faults and other casualties incident to the business, they had to succumb, bankrupts. Many of them from their manly deportment, probity, enterprise and industry, with all those good qualities that make a good citizen, deserving a better fate. Unfortunately, there were always enough eager to take their places not deterred by their fate, nor willing to profit by their example. How few have succeeded is too well known, and those few are more indebted to the location of their works, than to superior management. (I do not wish to detract or infer the least disrespect.) The prominent causes for this state of things after over production, is, first, the Operators must make a heavy outlay in the way of improvements, to take out and prepare the Coal on lands which do not belong to them, agreeing to pay a rental of say thirty cents per ton. If they get but one ton, they must pay the thirty cents, if it takes all their improvements to do it. Secondly, they must pay an average of thirty cents toll on lateral Railroads from their mines, before the dealers or consumers will buy, and then at the paltry sum of $1 75 per ton, little enough for a ton of rocks from a quarry above ground.—Thirdly, the liability of faults, causing inferiority of Coal, and an attendant cost which defies the utmost effort to make both ends meet, hence a resort to the Middle interests and Shylocks complained of, which undoubtedly leaves them in a worse state than before.

To obviate some of those difficulties, I would suggest a plan which a great many of your operators have overlooked. First, let them come to this Region and buy a tract of good Coal land, at two or three hundred dollars per acre. Their rent will be but a few mills per ton, and their improvements not liable to seizure for rent. Secondly, the improvements will not cost so much, as lumber is only about half the price it is with you. Thirdly, the lateral Railroad toll cannot exceed a few cents a ton as we have a railroad on one side of the valley, and a canal on the other. Fourthly, faults are of less frequent occurrence and Coal consequently more uniformly good, which the consumers know how to appreciate by paying a higher price for it than Schuylkill Coal. Lastly, the facilities for taking it to market are increasing, and the cost of transportation lessening every year. The market North and West will be large, and it is in its incipient state, so that the evils that creep into an old trade can be avoided, and the Operators control the trade to their own liking.

LUZERNE.

Year.	pardoned each ere in for se-	Number received in prison each year.
1818		97
1819		103
1820		95
1821		119
1822		90
1823	9	140
Total,	9	640

Total,

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er of pardons is equal to thirty-five
including thirty received from the
and that nine of those that were
iction, and had probably been twice
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Year.		
1810	5	147
1811	4	
1812	1	
1813	2	
1814	15	
1815	6	
1816	17	
1817	10	
1818	4	
1819		
1820	7	189
1821	17	197
1822	7	98
1823	3	38
Total,	98	2,343

THE FORESTS OF ANCIENT DAYS.—Hugh Miller, in a note appended to his late work, "The Testimony of the Rocks," argues that the existing flora of the United States, at the present day, is not to be compared to that of the "old carboniferous ages." He says, "The American Coal fields have been carefully explored; and what is the result? The geologist has come to know, that even the mighty forests of America are inconsiderable compared with the deposits of coal; nay, that all its forests gathered into one heap would fail to furnish the materials of a single coal seam equal to that of *Pittsburgh*; and that centuries after all its thick woods shall have disappeared before the axe, and it shall have come to present the comparatively bare, unwooded aspect of the long civilized countries of Southern Europe; it will continue to derive the elements of its commercial greatness, and the cheerful blaze of its many millions of domestic hearths, from the unprecedentedly luxurious flora of the old carboniferous ages." Truly, very wonderful are the coal fields of North America! If geologists inferred, as they well might, that the extinct flora which had originated the European coal vastly outrivalled in luxuriance that of the existing time, what shall be said of that flora of the same age which originated the coal deposits of the United State—*deposits twenty times as great* as all those of all Europe put together?

From th
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he last fourteen years, about three-
e prisoners committed, were dis-
of their sentences; and also that

Locust Gap.

The Mahanoy Basin, or Southern Division of the Middle Coal Field is separated from the Shamokin Basin by a high anticlinal line, familiarly known as Locust Mountain, in the summit of which the lower conglomerate rock is exposed; the Coal bearing measures being entirely cut off, thus forming two distinct and separate Coal fields. This circumstance is highly favorable to Mining operations, since it affords facilities for ventilation, without the expensive process of shafting through overlying rocks, and the width of *barren ground* is not so great as to diminish, in any perceptible degree the value of the property, as Coal lands.

Illustrative of the rise in value of these lands, it may be said, that a few years ago, a gentleman, traveling over Locust Mountain on a stage-coach, remarked, "that the man who bought these lands must have been insane." Now, these same lands could hardly be bought at any price, but if put to sale would readily command from three to four hundred dollars per acre.

The western boundary of the Mahanoy Basin is about eight miles west of the Borough of Ashland, where the Mahanoy and Locust mountains run together in high, abrupt ground, the synclinal axis of the basin having a rapid eastward dip towards Locust Gap, where there are two extensive operations which we purpose noticing, from actual inspection during the present week.

The Locust Mountain at Locust Gap is cut at nearly right angles to its base by a gorge about 400 feet as its average width, through which passes Locust Creek. The lands of the "Locust Mountain Summit Improvement Company," of which J. S. Heston, Esq., is President, embrace the west end of the Locust Mountain at the Gap; the northern half of the Mahanoy—the south line of this property runs a little south of the top—and the land between the two containing about 700 acres. The tract contains the whole of the Mahanoy Coal basin, and the north dip of the Locust Mountain in the Shamokin basin.

At this point the improvements of a first class operation were but recently completed, and the operation known as the "Locust Summit Colliery," is leased by Messrs. Anthony & Lloyd of this County.

The Mammoth Vein, the eighth vein from the bottom of the basin is worked, and opens on the north dip of the Locust Mountain, 18 feet in thickness; inside the Gap, 24 feet; at Mahanoy Mountain, 30 feet. We entered a breast of the upper gangway of the operation, where the vein is 18 feet in thickness, and inspected the Coal.—We unhesitatingly pronounce it as fine as any Coal to be found in the Anthracite Coal fields of the country. It is a bright, hard, free burning White Ash Coal, remarkably free from impurities, and sent to market from the breaker in good condition. We examined some Egg Coal being shipped, and must say that a finer article we never inspected. At the time of our visit, the breaker of the Summit Improvement Company contained some 800 tons of Coal of various sizes, awaiting shipment, which in consequence of the want of transporting facilities on the Sunbury Railroad, is much impeded. An eastern connection is a desideratum much needed. The Mine Hill Railroad is being extended to Big Run Gap, and but three miles more would have to be added to it, to place the Locust Mountain improvement at the Gap, in connection with an eastern market. The extension will be made if the "Locust Mountain Summit Improvement Company" and "Locust Gap Improvement Company" will insure to the Mine Hill Railroad a transportation equal to 100,000 tons per annum, which in our opinion, from the very fine quality of their Coal, extent of their veins and there improvements, they could safely promise.

On the east side of the Gap adjoining the Summit lands, and laying parallel with them, north and south, is the Coal estate of the Locust Gap Improvement Company, of which Abraham S. Wolf, Esq., is President, and which contains about 1000 acres. The openings of the Colliery on this property, are on the same vein, and identical in position, with its neighbor, the "Summit." It is named "Locust Gap Colliery," is leased by Fegely, Seizeholt & Co., of Northumberland county, and is also in full operation. The quality of Coal mined at this Colliery, is precisely the same as that of the "Summit."

The breakers of the two Companies are but a few yards apart, with the lateral track from the Sunbury road running between them. They were erected for the Companies by Messrs. Cleaver & Boughner, and in every respect, are perfect specimens of good workmanship.

The ground plan of each breaker is 40 feet wide and 97 feet long, the structure resting on five parallel walls the entire length of the building. The discharging doors of the bins are so arranged as to load cars on four tracks of Rail Road, two of which lie outside of the buildings, one west and one east, and the other two tracks lie under the building or bins between the first and second walls on either side.

The building is divided into seven bins or places of deposit for coal, of the following superficial base—of the north end, 36 by 48 feet for lump coal, next two bins each 12 × 24 feet, one for steamboat coal and one for Nut coal and the balance into four bins, each twenty-four feet square for Nut, Stove, Egg and Broken Coal.

The height from the railroad up to the square or top of the four last mentioned bins is 26 feet, making the heighth of bin 15 feet and the capacity of each of these four, 320 cubic yards. The heighth of Steamboat Coal bin up to square or top, above railroad, 39 feet, making the heighth of the bin 28 feet—capacity, 220 cubic yards. The capacity of the Nut Coal bin, 12 × 24 feet is 120 cubic yards, and the capacity of the Lump Coal bin is 380 cubic yards. Aggregate capacity, two thousand cubic yards. That portion of the structure forming the bin for Lump Coal is considerably higher than that of the four prepared Coal bins, the tip chute of the Locust Gap Improvement Company's breaker being 59½ feet above the railroad, and of the Locust Mountain Summit Improvement Company's breaker being 72½ feet above the railroad. The tip chute on which the Coal is dumped from the mine cars is 24 feet wide, and in length down the slope 15 feet, at the foot of which is a reverse or counter chute which discharges the Coal on a third chute beneath, pitching the same direction as the first chute and at the foot of this third chute and directly under the bottom of the counter chute is the platform with the perforated plates, slate pockets, &c., arranged for eight men to work conveniently in selecting the slate from the Coal, and the Coal to be preserved as Lump from that to be passed through the perforated plates into the hopper leading to the rolls to be broken; this counter arrangement of tip chute affording to the men protection from injury by the Coal when dumped from the cars. The first slope of the tip chute is supplied with bar screen of four inch mesh to take out the small coal and dirt which are discharged on a bar screen of finer mesh taking out the dirt. At the foot of this second bar screen, which is also 24 feet in width, is a convenient arrangement of spouts and pockets where the slate is passed out and the Coal passed to the rolls to be broken.

From the rolls the coal is conveyed by a spout to the elavators that carry the coal up to the assorting screen, which is considerably higher than the top of the prepared Coal bins. As it is discharged from the screen, spouts receive and convey the Coal of the several sizes to the top of the cast iron spiral chutes erected in the centre of each bin. The chutes for the prepared Coal have a diametor of 42 inches with raised flange at the outside with well hole 16 inches diameter—cast in segments, four of which make one turn, with a down pitch of 40 inches in one turn and are supported on wood arms morticed into four posts arranged around the outside of the chute. Although the bottom of the chute inclines toward the well hole, the centrifugal force imparted to the Coal in sliding down, prevents any from falling into the well hole until it arrives at the bottom or deposit of Coal in the bin, when it slides into the well hole and takes its natural slope on a conical pile; thus filling a bin of any depth without the Coal falling to crush and waste. The top of the spiral projects sufficiently high above the square of the bin to fill it without manual labor. The spiral chute for the Lump Coal is thirteen feet diameter from flange to flange, with a well hole of ten feet diameter, supported similarly to those above described, and stands in the centre of the Lump Coal bin, terminating in a large hopper at the top, adjoining the platform at the foot of the tip chute, where the men select the Coal.

From the head of the tip chute is a trussel work 64½ feet high, of the "Gap" breaker, and 77½ feet of the "Summit" breaker, with railroad extending from the breaker to the upper level gangway, also an inclined plane to each breaker from the head of the tip chute to the water level gangway. The hoisting gearing on the planes is somewhat of an automaton arrangement propelled by the engine. It is an endless chain passing round two winding crabs at the head of the plane, and two tightening crabs at the foot, keeping the chain in line in the centre of the ascending and descending railroad tracks. At the head and foot of the plane are shifting trucks on railroad lying at right angles to the plane, and on the trucks 2 rails in line with the rails of the plane. To the chain is attached two carrying cars equidistant. The cars are so constructed, that when on the plane the top timbers of the car are horizontal, (the angle of the plane is 8 in 12) consequently when standing on the level rail of the shifting truck at the head of the plane, the top timbers slope toward the tip chute 8 in 12. The road on the plane and the carrying cars being of a narrow guage, are so arranged as to pass between the rails of the mine road, and into the pit at the foot of the plane. When a mine car of Coal is to be hoisted, all the manual labor required is to run the car to a certain point marked in the railroad over the pit, when the man at the head of the plane throws the machinery in gear, the carrying car comes up under the Coal car, carries it up the plane in a horizontal position until it arrives on the level at the head of the plane, where the Coal car comes to a pitching position, when two wheels (one on each side of the car,) open the door-latch, and the Coal is discharged into the chute, while the shifting truck is conveying both carrying car and Coal car in a lateral direction, to the line of the descending truck. If another car is ready at the foot, the motion continues, and the empty car is set down on the light track of the mine road at the foot of the plane descending toward the drift mouth, to which it runs by gravity. The motion of the chain and carrying car attached thereto, by a goose neck shaped coupling bar, acting against a beam on the shifting trucks, move them laterally in one direction, to the proper distance, where a latch holds them until the carrying car has moved off. The bumper opens the latch, when a weight attached to a rope passing over a pulley and fastened to the shifting truck, moves it laterally in an opposite direction, until the rails match with the road on the plane, where another latch holds it until it in turn is opened by the next carrying car, as it comes to its proper position on the shifting truck, when it again takes its motion laterally to the line of the other track.

One peculiarity about the frame work of these breakers, is, that it is without tennons or mortices. The posts are about one foot square at the bottom, and taper to some eight and some nine inches square at the top. At the necessary heights for the ties, the posts are boxed down to seven inches and six inches square; the ties are in pairs—one on each side of the posts; they are also boxed in two inches to fit the collar of the posts, projecting three feet past the post outside of the building, and the ties and posts clamped together with screw bolts of ⅝ and ½ inch round iron, the planking enclosing the Coal bins are supported between the pairs of ties without requiring to be spiked. This plan of framing affords great strength, and is particularly applicable for Coal bins, where it is necessary to guard against bursting by lateral pressure, as against crushing by vertical pressure.

The frame of the inclined plane and trussel work, also forms the frame of the engine house, 24 by 48 feet. The engines of each breaker are of thirty horse power, with hydraulic steam regulator attached, built by Thurston, Gardener & Co., Providence, R. I. The machinery and castings of the breaker were made by S. Bittenbender at Shamokin.

The breaker, engine house and tip house are boarded in, and covered with shingle roof, with ample eave projection, somewhat of the cottage order.

The spiral shutes; the carrying car hoisting, and plan of framing are the invention of Kimber Cleaver, Esq., and are decided improvements. On the two first, Mr. Cleaver designs to take out patents.

se who have influence ; it certainly is a fa-
In general a governor can refuse pardons
port him in refusing, or condemn him for
hend it becomes urgent to interest public
the executive, in those severe exercises of
determined and persevering refusals of par-
e public should know what are the cases in
d and secured, are again let loose to steal,
tack the defenceless and murder the inno-
tories, cities and dwellings.

frequency of pardons, they would be more
the laws, if the pardons could be granted
by the executive, upon his own impartial examination of the case ; but unhappily, the executive must act on the petitions and representations of others. This has given rise to the regular employment of pardon brokers and state prison solicitors, who originate and circulate the petitions, and probably in some instances, have obtained pardons by gross impositions. We certainly need not say, that we do not mean the least intimation that any governor has ever been aware, that the representations on which he granted the pardons, were procured by any improper agency.

It can hardly be necessary to communicate all the evils of the scandalous practice just referred to. One is that pardons thus procured. are the result of importunity in soliciting signatures to petitions, and of art, address and chicanery in fabricating statements of alleged facts. But the most revolting enormity is, that pardons are thus procured only by those who have property or able friends, and that the poor and friendless can enjoy no equal share of the executive's clemency. These last, therefore, and the whole class to which they belong, must be expected to become enemies to laws, of which they have not the equal benefit ; and many who only want a pretext for depredation, will find a kind of justification or even a merit in attacking a society, which shows favor only to the fortunate and the wealthy. Nor can such a sentiment be wholly reprobated. In despotic and barbarous governments. no circumstance excites a more lively indignation, than that riches gained by oppression, should so surely protect the spoiler. How then is our condition different, if the plunder obtained by a convict, can screen him from punishment ?

We have received such information, as to leave no doubt of the fact, that the counterfeiters have a fund alloted to the purposes of mutual protection in case of arrest, and also to obtain pardons in case of conviction. In one intance a pardon was presented at the New-York prison, by two solicitors, who had been active in procuring it; but they refused to deliver it, until the prisoner should pay their stipulated fee of six hundred dollars. The prisoner had a much larger sum in the hands of the keeper, out of which he ordered payment, and was immediately discharged. There is a farm near Auburn, which is generally understood to have been received by the present possessor, as a reward for obtaining a pardon.

The employment of money does not necessarily suppose that the petitioners are corrupt. The pardon-broker has his fee, but he may appear to act from benevolent motives. It is a common practice to assail the judges, and especially the jury who convicted the prisoner, with importunate statements in favor of the criminal ; and there are too many instances where such persons have most unjustifiably yielded to solicitations, and sanctioned petitions in favor of the worst of men. We are informed, also, of one or more cases of fraud, such as have been practised upon the Legislature, in tearing off signatures from another petition, and annexing them to a petition for pardon.

In 1821, a prisoner for grand larceny persuaded his prosecutor, for a reward

☞ *Ivens' Improved Pumping Engine.*—The winding machinery invented by E. M. Ivens, Esq., of Tamaqua; manufactured by Carters & Allen, and which has obtained such popularity among Coal Operators, has recently received for companionship, a simple yet very effective pumping engine, also an invention of Mr. Ivens, based upon the principal of the Cornish engine.

A day or two since, we observed one of these engines in operation at the Buckville Colliery, the property of the Little Schuylkill Company, and worked by Jones & Cole. At this Colliery it is nothing more than a steam cylinder on one end of the pump-rod, and 300 feet below is the pump on the other end. The simplicity of the engine renders its first cost less than that of any other engine in use for similar purposes. It has proved so satisfactory that it meets the warmest approval of the Coal Operators, some of whom are making arrangements to have the engine put up at their collieries. As stated, the engine is a modern construction of the Cornish engine, and is manufactured by Carters & Allen of Tama-

TAMAQUA, March 14, 1857.

MESSRS. CARTERS & ALLEN.—*Gentlemen:*—The winding machinery invented by E. M. Ivens, and by you erected at my shaft, has now been in successful operation for a period of six months or more, during which time it has worked most admirably and to our entire satisfaction. I have been hoisting on an average, about 250 cars or 500 tons per day, and if necessary, with the facilities at top and bottom of shaft, I fully believe we could hoist 400 cars, or 800 tons per day. We are now hoisting on an average about 50 cars per day, over and above what we did with the old machinery, and notwithstanding this increase, we are actually saving 1½ tons Coal per day in fuel. The old machinery I fully believe, was as good as any in the Coal region, prior to the invention of Mr. Ivens. As regards the economy in the wear of the rope, we would say the machinery has no equal; we have now been running about the length of time it would take us to wear out an ordinary rope with the old style of machinery. The rope we are now using is not perceptibly worn; we think we can safely use said rope from 4 to 5 years longer. We would therefore conclude by saying, for economy in fuel, and in the wear of rope, simplicity of construction, and the facilities the engineer has for raising Coal with dispatch, your machinery has no equal.

Yours, most respectfully,
WM. DONALDSON & SON.

At each of these breakers, it is possible if necessity requires, to load at one time, 32 cars—each holding 4½ tons of Coal—with the different sizes. From the bins, a car can be loaded in one minute.

The Coal shipped from these Collieries goes over the Philadelphia and Sunbury Railroad to Sunbury. From thence a portion goes to Elmira via. Williamsport, but the greatest proportion is shipped at Sunbury south to Harrisburg, Baltimore, etc., via the Canal.

In company with Wm. H. Marshall, Esq., of Shamokin, Agent of the "Summit" and "Locust Gap" improvement companies, we walked over a portion of both estates, and found it well timbered with pine, oak and hemlock. A saw mill on the property, the engine of which was built by L. Castine of this Borough, has turned out from logs hewn on the property, all the lumber used in the improvements. Mr. Marshall estimates that since its erection—two years since—it has sawn 1,500,000 feet of lumber. The breakers, miners' houses—very comfortable they are too—workshops, etc., are constructed of timber sawn by the mill. A shingle machine in the mill run by the same engine, has turned out all the shingles used. The size of the pines on the property, may be judged from the fact that the day we visited it, a pine log, 3½ feet in diameter, was being shorn of its fair proportion. The timber of the respective estates cannot be excelled.

The upper gangway of the "Summit" Company's operation extends now about 270 yards; that of the "Gap" about 300 yards.

Mr. Marshall, two years since, erected with much labor a log house in the Gap. He is now enabled to take a position on the little platform at the "Tower of Babel," a confused mass of huge rocks on an elevation of the Summit property and gaze not only on magnificent mountain scenery, spreading miles and to the far distance, but upon two of the finest Coal operations in the Region, and upon a collection of miners' houses, that for neatness of appearance and comfort, might prove models for many estates in this Region. Within the short space of two years the change has been effected. Enterprise, the modern magic wand touched Locust Gap, and what was a wilderness, unvisited save by the hunter and his prey, now begins to blossom as the rose. After all, steam is the true civilizer. It hews forests; builds cities; delves into the bowels of the earth for its hidden treasures, and brings men into closer contact with his fellow. The greatest momentum to man's progress was given, when steam was successfully applied to the driving of machinery.

Before leaving Locust Gap, we examined several surface openings of the Mammoth Vein, made on the property of the "Summit Company," by Mr. Marshall. They all promise well; and in the event of railway connection with the Mine Hill Road, giving the operators an eastern market, will be invaluable, as the quality of the Coal on these properties, would create for it a demand, and consequently ready sales.

following considerations: economy of original investment, daily cost of working, permanence of structure, durability of wire rope, or capacity for business. The latter being fully double that of any other machinery for similar purposes on the Company's works, at a diminished working expense.

Yours, truly,
J. EDW. BARNES, *Gen't Agt.*

n a bank to a large amount, the convict re-
h weeks, and received a conditional pardon.

rray, died in prison, while proceedings were
relation of his, who appeared to the inspec-
stated, that between two and three hundred
o obtain his pardon.

obtaining goods on false pretences, to a large
t business extensively. He was pardoned on
that his health was bad. We are informed

grand larceny, who had several names, was
a horse in Westchester county. He was ta-
et, and in the space of nine days, indicted,
gain committed to the state prison.

table family and connections, was entrusted
room he was placed, with cash to be deposi-
accident in making the deposite, he fell into
oney, and absconded with the rest. There
originally intended any fraud. He was pur-
to his indictment, and received sentence, but
l committed to the prison. The applications
tunate young man, were commended by every
o the compassion and sympathy of the human
e, and to those in which forgeries and depreda-
siness and property, we can not but ask, upon
ration o fpublic justice, such pardons can pro-
rinciples involved in them? Are no merchants
unishment? or are those only to be pardoned,
f a moral and religious education to guard
ho, notwithstanding offend? Are they only to
so clear that no defence can be made? Can
ility by relying upon the opinions of others, to
by the constitution? Or, finally, can it be that
r the wealthy or well educated, and for those
at the arm of the law is only to fall upon house-
d children of misfortune and poverty?

ted upon condition of leaving the state, calls,
t subject. If this state can justly pardon on
that condition, our neighbors may do the same. If, then, our pardoned convicts go to other states, and theirs come to this state, we are at a loss to understand wherein consists the benefit. But if the condition is, that the convict

shall leave the United States, we doubt how far it becomes this country, either to set or to follow an example so contrary to the good will and comity which should govern the intercourse of friendly nations.

As the Legislature has no constitutional control over this subject, so no direct remedies can with propriety be proposed. Nor is it believed that any will be necessary. If, however, the governor should think proper hereafter to communicate annually to the Legislature, applications which shall have been made to him for pardons, with the names of the petitioners, it might be a great check upon the impositions attempted upon the executive. When governors are no longer compelled to pardon some, for want of room for all, there is no cause to doubt, but that their official conduct will be in accordance with the views of an enlightened community, and that the executive of a free state will delight to take counsel from that public opinion, which is the final and most unerring arbiter of the merits of public measures.

VII. *Whether the New-York prison should be altered or rebuilt on its present site, or a new prison built elsewhere; with estimates of the expense of each.*

That the Legislature may be enabled to judge whether it will be proper to remove or continue the prison on its present site, we have obtained a plan, showing the necessary and indispensable alterations to the interior of the present prison, in order that an improvement in its discipline and productive labor may be effected: also a diagram of the whole premises belonging to the state, describing the extent and shape of the prison walls, the form and situation of the prison, and the site of all the workshops, with explanations by the surveyor; which plan and diagram are herewith presented, marked H and I.

The alterations suggested are as follows: Numbers 1, 2 and 3, of the south wing, as designated on the plan, the whole interior to be taken out, and five stories of cells to be substituted; and numbers 1 and 3, of the north wing, to receive a similar alteration; which will give 550 cells, each sufficient to hold one person. Number 2, on the north wing, contains the chapel, appropriated as a place of worship, which it has been deemed proper to leave entire; and number 4, on the south wing, to be set apart for the use of the female prisoners; and number 4, on the north wing, to be occupied as the hospital. It was furthermore contemplated, that the wall on the north corner of the premises should be extended, in order to the enclosing a square of ground; and that all that part of the wall commencing on the south side of the prison, in a line with the east end of building number 3 on the south wing, and running around the whole north wall, until it shall arrive at a point on the north side of the prison, in a line with the east end of number 3 on that wing, should be raised fifteen feet above its present height; and that the workshops shall be removed, and placed around and adjoining the inside of said wall.

With this report is presented an estimate, marked K, made at our request by two very respectable mechanics of the city of New-York, showing the expense of so altering the prison, and amounting to $49,668 for the materials and necessary superintendance; but on completing the plan, it was discovered, that the number of cells would be less by 150 than what had been estimated; and it is calculated, therefore, that the cost will not exceed $40,000, exclusive of the labor, all of which to be performed by the prisoners.

We have endeavored to ascertain for what amount the present state-prison at New-York, with the ground belonging to it, would probably sell; and can see no reason to believe that the land, with the materials of the building, if to be taken down, would bring more than fifty thousand dollars. The necessary expenditure, therefore, for altering the New-York prison, if added to the probable amount that may be obtained for the premises as they now exist, will be equivalent to a sum sufficient to purchase a site at one of the marble quarries, and erect a prison that will accommodate 800 men upon it.

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THE IMPROVEMENTS AT THE LOCUST GAP.—We recently gave an account of the operations at the Locust Gap. The "Summit Improvement Company," which by the way, does not mine, but has made the nee essary improvements for mining at that point, is we learn, in an excellent condition, pecuniarily, being clear of debt, and with some $6000 surplus funds on hand, after completing the Summit Colliery recently described by us. We notice the fact with pleasure, for the Company is an Association for the improvement of the Coal lands of the Region which is the scene of its operations, fills that position now, which will have yet to be adopted in Schuylkill County, namely, the opening of Coal lands and the ereetion of improvements for individual operators, who themselves aro unable to make the necessary improvements. The fine operations at Locust Gap, are deservedly attracting attention, for the fine quality of Coal they produce, and the admirable manner in which thoy are managod.

We publish the following communieation from a friend in reply to our remarks of last week:

For the Miners' Journal.

MR. BANNAN:—In your Coal article of last Saturday, you state that an effort will be made to change the present management of the Schuylkill Navigation Company on the ground of inefficiency. As one interested, I should like to know for what reasons? Such a movement on the part of the stockholders, it seems to me, would be preposterous, particularly when the trade is about equal to that of the Railroad, and is on the increase while the latter is on the decline. This looks like anything but inefficiency in the management.—The Coal trade of the Schuylkill Navigation is heavier now than it ever has been, and that too at a period of general depression in business, when the trade of the Lehigh, and I believe that of all the other Canals, is not increasing, but in many instances decreasing. The trade of the Lehigh Canal, similarly situated, has considerably declined this year, while that of the Railroad is increasing. I cannot conceive how the charge of incompetency can be made against the management, when such are the fruits of their management.

FAIR PLAY.

"Fair Play" would seem to be right in drawiug his conclusions, but there aro some who think differeutly. They assert that circumstances have forced the trade ou the Canal, and that with more energetie management, they could just as easily be earrying fifty thousand tons of Coal now, weekly, as forty thousand, which would largely inerease the revenue without materially increasing the expenses. These aro the charges made and the ground of opposition. Twice we have been approached by persons representing themselves to he stockholders, to obtain the aid of the *Journal* against the present management; but we havo declined any sueh erusade, until at least those who found fault could point out some better policy to be pursued, or at least would satisfy us that a better policy would be adopted in case of a change. It is a very easy matter to pull down and destroy, but not so easy to build up again as some people imagine. It may however result in some benefit to all parties to mako tho management acquainted with tho eharges preferred against them. It is evident that the Canal, in the present position of the trade, is the main stay of this Region,—it requires less capital to those who mine and sell their own Coal, insures them a better price for Coal—and keeps the different kinds of Coal seperated to a greater extent than by Railroad; and all the operators are seeking this avenue to market. It is therefore of the utmost importance that every exertion should be made on the part of the managers to increase their boat and car facilities, to meet the wants of the trade by that avenuo. It is true that it was hardly to be expected that so largo a portion of the trade would bo thrown into the Canal this year—but our impression is, that the Canal will hereafter always have as mueh trade as she ean carry, if she will make tho necessary provisions for it—and just in proportion as she increases her tonnage ean sho cheapen her toll. The trado growing up at points within the reach of boats, without trans-shipment, is largely on the inerease, and in a few years will he equal to the whole eapacity of the Canal, and the sooner she pushes her tonnage to that point, the better for the trade and also her stockholders. Difficulties are multiplying at Port Richmond—the limiting of freights

The Explosion of the Princeton Gun.

The Franklin Journal.

The September number of the Journal of the Franklin Institute, contains much interesting matter. An article that will attract much attention, is a Report on the Explosion of the Princeton Gun, made by the Committee on Science and the Arts, constituted by the Institute. It is a very able paper, and the Committee arrive at the following conclusions:

1. The iron of which the gun was principally made, was capable of being rendered of a good quality by sufficient working.
2. In the state in which the iron was put into the gun, it was not in a sufficiently good condition for the purpose to which it was applied.
3. As the metal existed in the gun it was, decidedly, bad.
4. As to the manufacture of the gun, the welding was imperfect.

These facts relate exclusively to the gun submitted to the examination of the committee, and are derived from immediate experiment and observation; but, besides giving these to the public, the committee feel bound to express the opinion, that in the present state of the arts, the use of wrought-iron guns of large calibre, made upon the same plan as the gun now under examination, ought to be abandoned, for the following reasons:—

1st. The practical difficulty, if not impossibility, of welding such a large mass of iron, so as to insure a perfect soundness and uniformity throughout.

2d. The uncertainty that will always prevail, in regard to imperfections in the welding. And,

3d. From the fact that iron decreases very much in strength from the long exposure to the intense heat, necessary in making a gun of this size, without a possibility, with the hammers at present in use in this country; of restoring the fibre by hammering. At the same time the committee would not wish to be understood as expressing any opinion, upon some other plan, is practicable, or whether the construction of a safe wrought-, in the present state of the arts, inasmuch subject has not been referred to them

—the increased tonnage from other regions at the various shipping points centering near New York, with much lower freights to the East, thus drawing off vessels from Philadelphia; which, together or with the determination of every operator who is forced to sell his Coal here, not to send a ton to Port Richmond, if he can procure another outlet, while the middle interest is maintained at that point, all militate largely against the Coal Trade at Port Richmond—and nothing but the equalizing of these disadvantages will increase the trade much at that point the present year.

minish, it being a material than which nothing more useful can be found, for the purposes to which it is applied, among the productions of nature or art.

3. That the marble quarries, on some of which a prison may be built, are so near the place of the greatest demand, that the expense of transportation is very small; that transportation is by water; and from these causes the situations are most favorable; also for the supply of the demand from other states and places. At one of the quarries, we found them executing an order for Charleston; to which and other southern ports, they may be transported at very cheap rates, by vessels going to those places in ballast.

4. That in point of situation, these quarries are incapable of being supplanted by any others more advantageously situate.

5. That it is a business at which hard and constant labor can be exacted, and be made proportionably profitable; while the spirit of the law condemning to confinement at hard labor, in the state prison, may thus be carried literally into effect.

6. That in this article, manual labor is not likely to be farther supplanted by machinery.

7. That having the materials for building within the walls, the prisoners may be compelled to build and extend their own prisons to any limit, which the possible increase of criminals may require. In the same way, the prisons may be made impregnably secure, with little other expense except prison labor; and all escape may be made as hopeless as it is now at Auburn.

8. And to this list of advantages which regard employment, we add an important benefit, applicable to a new prison, wherever situate. It may and ought to be made incombustible; and if of marble, it will be, in a great measure, imperishable also. The annual appropriations for repairs, will therefore be much lessened.

With regard to the assistance supposed to be wanted, in case of insurrection, we have already stated our belief, that the discipline we propose, will render insurrection very nearly or quite impossible.

Upon the whole view of these circumstances, we conceive that the advantages of the employment of cutting stone, may be relied on with as much certainty as any thing in the compass of human affairs, which is future. We are of opinion, that those advantages greatly overbalance the objections to a removal of the New-York prison. And upon the whole matter, we respectfully submit to the Legislature, our unanimous and decided opinion, that a new state prison should be built in some situation, where an abundant supply of stone, proper to be wrought, may be had, and on navigable water, affording an easy communication with the city of New-York.

VIII. *Of the alterations and amendments of the laws respecting the state prisons.*

The observations already made in the course of this report, have pointed out most of the alterations which we conceive it may be proper to make in these laws. The present statutes on this subject, are many and various, and not always easy to be understood and reconciled; and it has appeared to us, that a complete revisal of the whole system was necessary. The labor of that revision has been undertaken by one of our number; and all the laws relating to the state prisons now in force, or appearing necessary to be enacted, have been methodically digested into one statute. Several alterations will be requisite, should the Legislature determine upon the building of a new prison. We have

[FOR THE MINERS' JOURNAL.]

ON VENTILATION OF COAL MINES, AND UNDERGROUND WORKS.

No. 3.

[Continued.]

Before we notice the air shafts and ventilatiug powers in use in the Lancashire Coal Field, we will offer some thoughts on the principal defects in the system of ventilating the mines, and endeavor to show how it might be improved and simplified.

We will give an example to show the distance the air must travel through subterranean passages before it can escape from most of those Coal mines. We will not take into account the extent of the property iu which we locate our mine, but we will simply suppose that a certain number of winning drifts has been driven a certain distance from each side of the principal exploriug drifts, so as to represent a mine in a *half opened* state, which will look more like a mine in actual operation, as they are most generally found in practice. We will suppose the distance from the shaft to the boundery on the rise to be 800 yards. This is a sufficient breadth of Coal to be divided into 8 panels in each grand section of the mine, or on both sides of the exploring drifts. This would make 16 panels in the whole. Then as each panel is divided by a pair of winning drifts, their whole number would amount to 32 winuing drifts. As the winning drifts never measure all an equal distance from the exploring drifts, we must suppose tbem to have reached an average distauce from the exploring drifts of 500 yards each drift, or each pair of drifts. Then the total measuremeut of the winning drifts will be 16,000 yards. As it is necessary to carry the air into the extreme rise workings of the mine—if not by the principal exploring drifts by auxiliary ones—which would make ascending and descending air course to and from the rise workings, twice the distauce the boundery on the rise is from the shaft, or 1,600 yards which added to the length of the air course through the winning drifts, would sum up to 17,600 yards, which would be eqnivalent to 10 miles of air course, and the distance the air must travel before it can escape from the mine. But this is opening a mine on rather an extensive scale, yet it will not exceed that of the Blackbrooke Colliery which we have previously noticed.

It is aot the increased distance of air course alone that is objected to in the Lancashire system of ventilatiou, but with the distance, the air must travel with a high velocity, and this velocity must be maintained through the whole distance. Then both the extra distance the air must travel, and the velocity with which it travels, adds to the friction which renders it necessary that extra power should be used to produce the ventilation. Besides it is necessary to place quite a number of air doors and *air cloths* in the principal roads and drifts which are used to convey the Coal from the workings of the mine. In a mine being opened in the same manner as we have supposed above, it would require at least 16 air doors or air cloths to turn the air into tbe different winning drifts. The direction of the air depends upon these air doors, and when any of them become broken dowu—often the case—the ventilation to some part of the mine is suspended until they have been repaired. In some cases it is necessay to place two air doors in the same passage, a short distance apart from each other, and in case of one of them being broken down, the other may in a measure be depended upon. Such are known to miners by tbe name of *double doors*. But t ese are chiefly confined to the passages which communicate with the entrance and escape drifts, at points not far distant from the descending air shaft, and not far from the ascending air shaft, where in case of one air door only being used, and that being left open for an unusual space of time, the whole body of air would pass from one shaft to the other, leaving the workings of the mine in an unventilated state until the door was again closed Air doors are sometimes left open a considerable length of time when wagons are thrown off the track as they are passing through the doors, and it is very likely that severe explosions have occurred in consequence of air doors being left open, and by their being broken down. As few air doors should be used in a Coal mine as possible to direct the course of ventilation, but where the air is coursed round the whole of the workings in one undivided body it is impossible to do without air doors, to throw the air into tbe winning drifts and into the workings of the different districts in operation.

The ventilation of these Collieries would be much improved if the body of air was divided into a certain number of parts, and each part used to ventilate two or four districts. This would reduce the velocity of the current, and the length of the air course, or rather what constituted the single air course would be divided into as many separate air courses as the whole body of air was divided into parts. For instance, if ten miles of air course were divided into four parts, and into four separate air courses, each taking a division of air from the main body of air, then the air courses would be reduced to two and one-half miles, and the velocity would be reduced to one-fourth, if the same quantity of air was entering the mine in both cases. If the mines were ventilated by divisions, it would be necessary to use *air crossings* in a similar manner as they are used in the Newcastle Collieries. It would also be advisable to use three exploring drifts instead of a pair, so tbat tho air will enter the middle drift which will distribute a portion of air to all parts of the mine, which air will again be collected into the side drifts after it has ventilated those parts of the mine alloted to it. It would be a matter of economy to dispense with air doors altogether. This could be effected by ventilating every district in the mine with a separate division of air. In this case a Regulator and an air crossing would be needed to every district. The proper situation for these would be in the same manner as was described iu No. 1 of this series, under the ventilation of the Newcastle bord and pillar, where the use of the Regulator and air crossing are—I hope—fully explained. By referring to that description it may be seen that to dispense with the air doors it would be necessary to use as many air crossings and Regulators iu their stead. This may give rise to a question concerning the economy of air crossings similar to. How can an air crossing and an air Regulator be of greater economy than an air door when it is kuown that the former in a general way costs from fifteen to twenty-five dollars more than the latter in labor alone? In answer we will say that an air door, if it only costs two dollars to erect it, would cost, in most cases, seventy-five dollars a year afterwards for attendance, where an air crossing needs no attendauce, and a Regulator very little. Perhaps a Regulator would not need be shifted more than once in twelve months.

When air travels an extraordinary distance through subterranean passages, with a high velocity, the amount of resistance which it meets with in those passages may be *nearly* determined by simply opening some of the air doors, in any passage communicating directly with the ascending and descending air shaft. In this case the amount of resistance the air meets with in the entrance passages, in advance of this door, will be exerted against the door, and it will require a certain force to open it; sometimes this force will be equal to tbe strength of a full grown man. If the air roads become contracted in any part in advance of these doors, the resistance will be increased and the pressure on the doors will be increased accordingly. When miners are aware of this circumstance, tbat is when any unusual pressure is indicated on the air doors, they know that something is wrong in the air roads, which leads to their being repaired, or to tbe impediment opposing the current of air beiug removed. The *exact* amount of resistance could be determined by opening the air doors in a passage communicating with the two shafts, so as to allow a free passage for a current of air, the velocity of which must be measured and compared to the velocity of the current returning from the working after the doors have beeu shut. The velocity of the current when the doors were opened would be increased on account of the shortened distance of passage between the two shafts, which would reduce the friction; but when the doors were again closed the velocity of the current would be reduced, and this reduction would be occasioned by the current being forced through the passages and through the workings of the mine. If the velocities of the currents in this case were compared, the resistance would be directly as their difference; or what was lost in velocity in the current returning from the workings, would answer to the amount of resistance.

[To be Continued.]

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STEPHEN ALLEN,
SAM'L M. HOPKINS,
GEORGE TIBBITS.

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[FOR THE MINES' JOURNAL.]

ON VENTILATION OF COAL MINES, AND UNDERGROUND WORKS.

No. 3.

[*Concluded.*]

The objects chiefly to be aimed at in the ventilation of the Lancashire collieries, is a slow or moderate current of air, and a reduction in the length of the air courses. These can only be effected by dividing the air into a certain number of parts to ventilate the mine by divisions.

The Lancashire system of ventilation was, and is, practiced with sufficient success in the upper coal seams of that coal field, which generate less explosive gases than the deeper ones, as the Rusby Park, the Little Delph, and the Orrel coal seams, which are the deepest worked at present, and which yield the best quality of the Lancashire coal, and consequently, they prove the most profitable when economically worked. It is in these coal seams that colliery owners have been desirous of introducing an improved system of ventilation.

The shafts, in this coal field, are scattered about the mining properties in an irregular manner—not in single shafts at a distance of three or four hundred yards apart—but in clusters associated so near to each other that one single steam engine is often employed to wind coal out of three, four, and even five shafts at the same time. At one of the Lancashire collieries I found five coal shafts sunk within the distance of 150 yards, and three in the five were sunk above 600 feet from the surface. This is the effect of ill ventilation, for were the ventilation more perfect, a less number of shafts would be required, or an *upcast* or ascending air shaft, and a *downcast*, or descending air shaft, would be sufficient to ventilate any extent of mine.

It is more difficult to ventilate a mine with many shafts than it is with a few, or with an *upcast* and *downcast* that is on an ordinary extent of mine; because a number of shafts require more principal passages to be kept open and free for the currents of air to pass to or from each shaft which in a measure destroys order. Yet an extra shaft may be useful in some cases, but it is quite an easy matter to divide a main body of air descending by one shaft into a number of parts, which may be distributed throughout the various districts working in the mine; these parts, or divisions of air, are as easily collected into one body (after they have ventilated their respective districts) to ascend through one principal air shaft. I have known cases where two, three and four shafts were intended as descending air shafts, but the changes of the weather would produce such an effect, that the air would ascend through one or more of the shafts at various times and seasons, without it doing any duty in ventilating the mine. This will often be the case when the descending shafts are together, of larger area than the passages leading to the workings of the mine. The number of ascending air shafts will make no change in this effect, if the passages between the ascending and descending air shafts are not enlarged, so as almost to equal the combined area of the descending air shafts. I have seen experienced viewers upon witnessing a current of air ascend what was designed for a descending air shaft, mightily puzzled to account for the circumstance, but it is easily exposed with but a slight scientific investigation. The principal cause is, the resistance the air meets with in the insufficient air roads, where the air moves with a certain velocity, and only can take a certain amount of the air which is descending the desending air shaft, leaving the rest and overplus to escape from the mine as it best can, which it effects by way of some of the designed descending air shafts. We may come to the conclusion that after two shafts have been provided for ventilation, that the ventilation of a coal mine altogether depends upon the passages leading to and from the workings, the manner in which the air is distiibuted, and the power nsed to produce a current of air for an ordinary sized coal shaft is capable of supplying from one hundred, to one hundred and fifty thousand cubic feet of air per minute, and if the combined area of the passages, leading to the workiugs of a mine, are not equal to that of the downcast, or descending air shaft, it is useless to employ more than one downcast shaft; if more were used in this case it would do more harm than good, and it would cause in some degree, both friction and confusion.

When the ventilation of a mine is found to be inefficient, the power employed to produce the ventilation is oftener taxed as the cause by underground managers, than the passages, and underground air courses, and the friction and resistance which they incur. In difficulties of this nature, a variety of ventilating powers have been applied in the Lancashire Coal Field. Those which have been the most successful, are the furnace, the steam jet, and a powerful fanner, worked with a steam engine. Blackbrooke Colliery is ventilated by a ventilating furnace, assisted by other furnaces, which are used to generate steim for the use of the steam engines which are employed in the mine, to raise coal on the incline of the vein, from the dip of the workings to the level of the shaft. The ventilating furnace is nsed at the Laffak Collieries, the Sankey Brooke Collieries, and the Broad Oak Collieries which are all in an ordinary state of ventilation, with Blankbrooke ranking at their head. The Haydock Collieries situated in the adjoining neighborhood were ventilated by a steam jet, but whether this is continued until the present time, I am unable to state. I sometimes think it must have been abandoned since the year 1852, on account of a severe explosion taking place, while the steam jet was in operation. The steam jet is not so steady a ventilating power as the furnace, without it is very closely attended and the steam kept at one uniform pressure. When the ventilating power is unsteady, or when the power is alternately increasing and decreasing, it is often attended with ill effects, if even there is a *sufficient* quantity of air kept in constant circulation. This is especially so in the Lancashire coal mines where we have seen that the coal is worked out on the rise of the workings first, which forms an immense reservoir into which the gas finds its way, and where it remains like an enemy in ambush, ready to spread abroad death and destruction at the least touch of a flame of a candle: but more than this, it sallies forth in parts, on all occasions when a reduction of pressure takes place in the atmosphere, or when the ventilating power has been slackened, and has again been put in full force: for when the ventilating power is for a time decreased, the exhausting power is evidently not so great throughout the mine, this is attended with the gas retreating a short distance into the goaves. If the ventilating power is not put in full force for some time, then the goaves become filled with gas to its edges, past which the current of ventilation is passing. When the ventilating power is again put in full operation, it exhausts the air in the mine and relieves the gas in the goaves from a certain amount of pressure. This causes a quantity to escape from the goaves, which is very apt at some time, to produce an explosion. For this reason alone, the ventilating power used in all fiery coal mines, should be as steady as possible, and they should be kept in full operation both by night and by day; for if the ventilating power was slackened by night in a mine where gas was liable to lodge itself into any reservoir, it would be very apt to lead to an explosion in the mornings when the miners were descending or entering to their work, or after they had commenced their daily labors, and after the ventilating power had been put in full force. I should think that by referring to the *time* when explosions occur, it will be found that a great many have taken place on mornings about the time of commencing work, and this in mines, or in parts of mines which were known to be free from an explosive mixture on the evening previous. Although there are many ways in which explosions may happen nine in ten cases of explosions which have happened within my knowledge, could have been avoided. Some would here ask, why are they not avoided, or why do not the workmen complain of their danger in such cases? We say in return, that a workman is confined to a particular part of the mine, and if even, he understands the exact nature of his danger, he seldom knows of its existence until the fatal moment arrives when he may be swept into eternity; his life being in such cases, trusted into the hands of no other than the manager, and if the manager understands the scientific as well as the practical part of his business, he will know where to expect danger, and how to meet it, and provide against it.

It has been a question of some moment among scientific men in England, as to the means of protecting miners from the dangers of explosions; but it is out of *their* power to prevent them altogether, yet *they* have undoubtedly done much good, and perhaps saved many lives from the destructive element, *fire damp*. Much more good would have been done, had *they* not confined *their* experience in the coal mines, to that obtained by an occasional visit to the mining districts. But we have much to be thankful for, and we are infinitely indebted to the scientific gentlemen, who invented for our special purpose, the *safety lamp*, the *ventilating furnace*, and who were the authors of several other invaluable improvements, in the working and ventilating of coal mines. If we picture a coal mine in olden times when miners were in constant dread of explosions taking place, when the fliut mill was used instead of our beautiful and efficient safety lamp, when *coal carriers* were used instead of wagons running on a rail road, and when a coal mine was at all times in some locality, as ready to explode by the least touch of flame, as a powder magazine would on the least application of a spark of fire, we can easily see the contrast between our mines at present, and those of the date when coal mining was in its infant state. We learn by reflection that we have much to be thankful for, and also that it is our duty to forward all improvements which are likely to be beneficial in the saving of life and property. There is yet room enough for improvement. But the greatest life preserver in a fiery coal mine, is the *care* and *attention* of an efficient manager.

I conclude this by hinting that ventilating powers should be employed to exhaust the air from mines or from any part of a mine, when such is practicable, because when a condensing, or compressing force is used, it adds to friction. However, it would be advisable to use a waterfall as a compressing force, when such was convenient, to act alone or in combination with a furnace; yet this would not *always* be economical when the water was to be raised

Yours, &c.,

T. H. W.

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An eminent geoligist, Mr. Whittlesey, expresses it as his conviction that coal-beds were deposited from water, under the same circumstances, as the other beds between which the coal is found. Mr. W. says that the numerous analyses of coal show thatno timber now existing contains within itself the proper quantity of ingredients to form coal. It must, therefore, acquire its ingredients in part from some other source, or a part of those existing in wood or woody-fibre must be deposited, and another part of the ingredients remain in excess. There is very little vegetable matter that contains nitrogen, and woody-fibre has none. In coal nitrogen is found in notable quantities at almost every analysis. Woody-fibre seldom furnishes more than 50 per cent. of carbon; coal has from 70 to 90 per cent. The inference that coal was once in a vegetable state arose at first from the fact that the impressions or petrifactions of leaves and trees are abundant in coal strata. As the impressions of the same trees and leaves are found in the shales and sandstones that overlie and underlie these strata, this fact, says Mr. Whittlesey, is equally strong proof that the sandstones and shales are of vegetable origin.

Bro't forward,

Buckles and territs,			
Horse collars and straps,			
3 bottles harness-blacking,			
Paid blacksmith, out of prison, for shoeing horses,			
Do. George Royse, for taking care of horses a ing county carriages 334 days this year,			

Lighting, &c.

616½ lbs. of candles,	76 60		
Samuel Townsend, for candles and soap, (quantity not stated,)	25 76		
		102 36	
862 gallons oil,	573 91		
3 do neat's foot oil,	3 31		
4 betties of oil,	1 00		
		578 22	
			680 58

Fuel, &c.

112 22/36 chauldrons coals,	1129 50		
Cartage do	25 33		
		1154 83	
601 loads wood,	921 36		
Cartage,	99 49		
		1020 85	
			2175 68
4000 bundles straw,	152 23		
Cartage of part of do.	3 00		
		155 23	
554 brooms,	44 12		
110 loads of sand,	64 00		
		108 12	
315 bbls. soap, soft,	702 51		
130 lbs. hard soap,	9 10		
		711 61	
8 casks lime,	14 25		
1 load do.	1 63		
Plaster Paris,	45		
1 M. brick,	6 62		
4 shovels,	4 00		
		26 95	
10 bundles of flags for chairs,	1 25		
3 hanks catgut for clock,	1 87		
1 stove and pipe for office,	46 56		
1 do do	34 31		
18 doz. table spoons,	12 86		
79½ feet fire engine hose,	64 59		
Straps for do	1 12		
1 hone for barbers,	1 25		
18 razors,	5 25		
200 darning needles,	1 00		
3 qrs. 12 lbs. hoop iron,	4 99		
2 large kettles,	36 00		

Carried forward,

BROAD STREET TRADE.—But little Coal goes into Broad street by Railroad compared with former years from Schuylkill County. The city is principally supplied by Canal, the difference in favor of the latter avenue being so great that it amounts to a profit. The Navigation Company gives facilities for the trade, and the R. R. Company seems determined to get rid of it as rapidly as possible. A dealer in Broad street sends us the following statement of actual expenses by both routes:

BY RAIL ROAD.

Freight and toll to Broad street, per ton,	$1 80
Hauling in Yard,	10
	5
Deduct gain in weight, 5 per cent. allowance	1 90
	$1 85

BY CANAL.

Toll, 65 cents—freight 90,	$1 55
Drawback,	10
	$1 45
Difference in hauling from Schuylkill East of Broad street,	5
Loss of weight by Canal, say,	10
	$1 60

After making full allowances it shows a difference of 25 cents in favor of the Canal, which is the profit generally obtained on a ton of Coal. In many cases when the Coal is delivered from the boat direct, the 5 per cent. allowed on toll by Canal covers the loss, and then the difference amounts to 30 @ 35 cents per ton to dealers.

Considerable quantities of Coal from the Lehigh Region is also going into Broad street, taking the place of Schuylkill Coal. We learn that it costs only four cents a ton more to deliver Coal, from the Lehigh Region into Broad street, via. the North Penn. and the Willow street Rail Roads, with all the unfavorable grades of these roads than it does from Schuylkill County over a road with a descending grade of only 95 miles long.

Many of ouroperators, who have no facilities for sending the Coal by Canal, could sell a considerable portion to Broad street dealers for retail, if the difference was not so great—but they are cut off in a great measure by the difference in expenses, and are forced to submit to the tender mercies of the dealers of Port Richmond, or curtail their business. We should suppose that it would be to the advantage of the Rail Road Company, to supply a portion at least of the retail trade of Philadelphia, from Broad street, particularly while they have hundreds of cars standing idle. A drawback of 20 cents a ton in favor of the Broad street dealers, would equalize the trade between the Schuylkill and Broad street, without interfering with the trade abroad. And now that the retail trade of Philadelphia is about commencing, we do hope the Managers of the Reading Rail Road will take this matter into consideration. It does seem to us that every experiment has been tried in Philadelphia to see how much the trade of Schuy kill county will bear without total destruction.

We are no advocate for the reduction of the rates of toll and transportation at this late period of the year, that would effect the trado abroad; but we do think that the Railroad Company ought to place those who are doing all their business by the Road, and from whom they are receiving all their revenue, on the same footing with others as regards the trade of Philadelphia. Common justice alone, could seem to demand such a policy. It is folly for the Rail Road Company to deny that such difference exists in this respect. The facts, figures, and the state of the trade by Canal and Rail Road, speak for themselves.

The Railroad has been beaten again by the Canal, upwards of two thousand tons, with plenty of vessels at Port Richmond. If this state of affairs is to continue, we will be compelled to reverse our Coal Tables, and put the Canal before the Railroad. The truth is, we see no hope for the Railroad to increase her tonnage, except allowing a drawback on tolls to our Operators here for the balance of the season to be paid to the Miner monthly,—and also to reduce the toll to Broad Street 20 cents a ton, to place the retailers there on about the same footing as those who receive their Coal by Canal. This will draw trade to the Railroad, and will protect the Miner, who is forced to sell to the "middle interest" at the low rates. There is as much Coal going forward as the market really requires at present.—The Canal has a capacity from 43 to 44,000 tons per week, and as she gets all she can carry, the Railroad Company only gets the balance. It is the *odium* that attaches to the Port Richmond Coal traffic, and the breaking up and the stopping of the Mines of those who are forced to sell to the "middle interest" at that point at ruinous rates, to which may be added the limiting of freights by buyers abroad below the running rates at Port Richmond, that has embarrassed the business of the Reading Railroad more than all other causes combined.

The Richmond system too of mixing all kinds of Coal by the middle interest there, is a standing reproach to the character of Schuylkill Coal, and is constantly driving off customers either to the Canal or other regions. It makes no difference how good a Miner's Coal may be, or how well prepared for market, he derives no benefit from its character, if he is forced to sell it to a "middle man" who buys all kinds of Coal badly prepared, and mixes it up with his Coal. Again—the middle man must secure his profit from either the producer or the consumer—(it generally comes off the producer, because the middle interest cannot obtain higher prices than the Miner who sells his own Coal of equal quality unless they sell on longer credits,)—the price is forced down, and the Coal is prepared for the market according to the prices paid for it. This is sold as Schuylkill Coal, and eight out of ten consumers, who buy the trash, firmly believe that *all Schuylkill County Coal* is of a similar quality, ignores it all and seeks his supplies elsewhere, although in many instances he buys and burns Schuylkill Coal under the name of Lehigh, purchased from some *shrewd* dealer who keeps all kinds on hand to supply his customers, pronounces it a capital article, and vows that he will never touch a ton of Schuylkill County Coal again. This system diminishes the number of customers for Schuylkill Coal, and effects the prices of the best prepared, as well as all the better qualities of Coal.—It is the wisest policy to point out evils that may exist in any branch of business in time, so that future action may be directed to their removal as

353 29
120 04
21 56
27 50
147 00
25 00
146 25
85 59
644 85

Bro't forward,

To Prison Weave-shop.

For 288 yards black cotton and wool cloth for convicts on 2d convictions,	145 20		
485 neck kerchiefs for convicts,	113 15		
4396 yards cotton and cotton and wool shirting for convicts,	2037 48		
130½ yards rag rug blanketing,	46 95		
410 yards strong blanketing,	410 00		
825 yards bed-tick for convicts' beds,	411 19		
3393 striped cotton and wool cloth for convicts' jackets and trowsers,	1960 00		
1288 pair of socks,	644 00		
		5767	97

To Prison Shoe-shop.

For 1017 pair men's shoes,	1017 00		
mending do	311 38		
154 pair men's and women's shoes, from contractor for convict shoe-makers,	152 80		
1171 pair of shoes cost		1481	18

To Prison Dye-shop.

For dyeing 1162 lbs. yarn for convicts' clothes,		211	48

To the department of Convict labor, called Sundry Manufactures.

For washing and mending convicts' clothes,	2283 34			
Cutting and making do	442 31			
Making 6 coffins,	12 00			
		2737	65	
				10198 28
				$31,843 16

Being the total expense of support and clothing, exclusive of the salary paid the Rev. Mr. Sanford, which, on the prison accounts, is charged to support and clothing, being $250.00 per annum, and which, in this statement, is put down with salaries.

Sundries to the credit of Support and Clothing, being part of the articles purchased and charged in the foregoing Drs. to that account, but which were retailed and sold to the officers and keepers of the prison.

1822.					
Nov.	Sold Alexander Coffin,				
	2 lbs. candles,			27	
Dec.	4 lbs. candles,		54		
	2 loads wood,		3 87		
	3 do		5 62		
				10	03
1823.					
Jan.	6 brooms,		50		
	12 lbs. candles,		1 62		
				2	12
Feb.	6 lbs. candles,			81	
March,	6 do			81	

Carried forward,

THE COAL TRADE—ITS DIFFICULTIES.—We are frequently asked the question,—"What is the cause of the present difficulties in the Coal Trade." It can be answered in a few words—over-production, and a comparatively diminished demand for Coal. The over-production was caused principally by speculations in Coal lands, and the formation of a large number of Coal and Improvement Companies within the last two years, principally in the new regions of Wilkesbarre and Scranton.—In these regions extraordinary exertions were made to open new collieries, more with a view of selling stock, and thus disposing of lands at high prices than for legitimate business, and the Sheriff will have a pretty busy time for a year or so at least. New collieries have also been opened in the Ashland or Mahanoy region of Schuylkill County, which are all in successful operation, and this additional supply has given the Canal Co. the increased tonnage she is now enjoying over the Railroad, and has made up for the stoppage of so many of the Red Ash Collieries in the first, or more Southernly portion of this region, within the last two years. On the Lehigh there has also been some increase, and also in the Shamokin Region during the last two years. In Schuylkill County, for the last twelve years, the colliery capacity has been either ahead of the demand for Coal, or ahead of the transporting facilities. This year we are suffering for the want of demand, with abundant transporting facilites, at least by Railroad. Such is the case on the Lehigh also—except the order of things there is reversed. Here the Canal Company is increasing their business largely beyond their share, and the business of the Railroad is falling off—there the transportation by Canal is falling off largely, and the trade by Railroad is increasing even beyond what it was supposed it would carry. In the Wilkesbarre and Scranton Regions, the ability to produce Coal is ahead of the transporting facilities; such is also the case in the Shamokin Region—but an increase of rolling stock would only be followed by a want of demand—so that all the Anthracite Regions, with but one single exception, is suffering from various causes, and all tending to depress the price of Coal in the hands of the miner or operator.

For the last four years the averaged increase in the consumption of Anthracite Coal, was in the neighborhood of 680,000 tons. It was supposed that an increase of at least 600,000 tons would be required this year, and the Coal Regions were prepared to furnish at least 500,000 tons of this increase—but the great depression in all branches of business, has sufficiently demonstrated that an increase of not more than 300,000 tons will be required this year, in addition to the supply of the winter months that will go forward to the New York, Philadelphia, and the intermediate markets on the lines by Railroad. The increase from all the Regions so far, is about 100,000 tons—and as only 15 weeks of the shipping season remains, it is extremely doubtful whether that quantity can be made up for the balance of the season.

The competition for the trade by the new regions, with the increased facilities of transportation, was anticipated in the early part of the year, and led to the organization of the trade in this County, with John Tucker, Esq., at its head, in order to keep the supply within the demand, especially in the early part of the season. As it was a new and untried experiment, all did not join in it, and it met with opposition from quarters where it was supposed it would receive co-operation, and it consequently failed in accomplishing as much good as was anticipated—in fact, the *necessities* of the trade were so great, that they almost defied any voluntary controlling power—but even outsiders admit that it kept up the price for the better qualities of Coal—and even that of the second quality that was well prepared for market, from ten to fifteen cents higher than it would have been sold without the organization. We also know, that by conference with other parties, it was the means of warding off many evils which would have proved much more disastrous in their consequences than any that have occurred so far to this Region. Many of the obstacles with which it had to contend with the present year, are now known, the more important of which can be removed, and the organization placed on a more firm basis, with more controlling powers. Its utility was at first doubted by many—but the *necessity* of the organization is now fully demonstrated in the minds of all thinking persons in the trade. This year it was compelled to shape its course according to the action of others, and consequently it was greatly embarrassed—but we do hope that all Operators who desire, or who can continue in the trade, will come together as a unit at the close of the season, if not before, for the purpose of setting forth their grievances as a united body, and take part in shaping the future action of the transporting companies. Heretofore we have left every thing too late—there has been no unity of action. The Stockholders, as well as the Managers of the transporting companies, ought to be made acquainted with the wants of those who furnish them with their trade, as well as a statement of the finances of the companies from the Managers. There must also be a change of policy at Port Richmond, and plans for effecting this change must be devised before the time of allotting the Wharves. This will require a unity of action and general consultation among the whole trade. Information is also imparted at these consultations which is of importance to all, and whether they unite or not in every measure, they are vastly beneficial to the trade.—Schuylkill County contains within her limits more than one-half, if not two-thirds, of the Anthracite Coal deposit of the United States. Heretofore she has furnished annually more than one-half of the supply. We have been falling behind for the last two years, with a more extended portion of the Region opened, not on account of our geographical position with regard to markets, *but on account of high charges in all the departments of the mining and transportation of Coal*, which is crippling the energies and progress of the Region.—*There must be a general reform throughout*, and we know of no more auspicious time to commence this reform than at the present, while the trade itself is undergoing a rapid revolution—and in order to make the reform effectual, it requires united and determined action on the part of the whole trade. Experience has long since fully demonstrated the truth of the declaration, "United we stand—divided we fall."

We have received the following communication from Philadelphia, accompanied with the name of the author, and commend it to the attention of those interested:

MR. BANNAN:—It is a question, which I should be pleased to have you answer—whether any Coal road, from the anthracite region to tide water, could transport Coal in successful competition with the Reading Railroad, if said road were to reduce the price of transportation to one dollar per ton from Mount Carbon to Richmond. If this can be answered in the negative, and in the affirmative, that the Reading Railroad could transport Coal with profit for one dollar per ton, from Mount Carbon to Richmond, it would give Schuylkill County, and relatively the Coal region contiguous to it, an advantage which would enable it ultimately, to double its supply, arriving at that result by a gradual reduction of the cost of transportation to one dollar per ton, and hence, a gradual increase also of tonnage or supply of Coal.

It appears to me, that if the Reading Railroad pursues its present policy, it will induce the completion and perfection of other routes, which will compete with it at its present rates of transportation, or which will at least injure or embarrass—perhaps at their own cost—the property of the Reading Railroad, by the effort.

When that period arrives, it will be discovered, that the Reading Railroad has, by her present policy, depressed the vigor, and diminished the production of the region, upon which it mainly relies for revenue, to that degree that it may require a series of years, by any change of policy or lesser rates of transportation, to again reach the sum of Coal production necessary to place it upon its present flourishing basis.

Consequently, in an active competition, which the Reading Railroad, by its present policy invites, it might become inconvenient to pay dividends upon its stock, till the production of the region upon which it must mainly rely, had been stimulated by lower rates of transportation—the certain result of active competition—to an aggregate of production which would again give to the Reading Railroad that ascendancy and prosperity to which its location and natural advantages entitle it.

and thus apply the preventive in season, than to defer it until the full force of its present policy is upon it? It would certainly be more judicious to make such a change in its policy *now*, as would, while there is a gradual reduction in the cost of transportation, at the same time stimulate gradual developement and improvement, so that ultimately the increased business of the transportation of Coal at one dollar per ton, may equal if not exceed the net profits now realized, instead of persisting in a policy which reflection and experience teach us, is at least hazardous in the future.

To exemplify, partially, relative to production—the first Coal basin is rich in immense deposites of White Ash Coal, at a depth of from 600 to 1500 feet, and which can only be reached by shafts. These shafts are necessarily very expensive in the sinking, though when sunk their great value, as economical agents in the mining of Coal, is evident.

Now here is a prospective source of supply of millions of tons of Coal but a very short distance above the head of the Reading Railroad, and peculiarly meriting its encouragement and protection. Could this vast interest be assured, by a proper policy on the part of the Reading Railroad, that so far as competition is concerned, it would stand upon a reliable basis, there would be no want of disposition or capital to proceed in a series of improvements, which would largely help to secure to the Reading Railroad a reliable business or income, which would cause its stock—the business of the road being firmly established against all competition—to be held for investment, instead of being dependent for price upon speculation on the conditions for the time being of the money market.

It may be as well to remark, that if any location in the Anthracite region is safe from competition, it is the first Coal basin to which I have referred—bounded by the Sharp Mountain on the South, and Mine Hill on the North; but still, the unimproved portions of it, owing to the large investments required for improvements, need at this time the encouragement which, the gradual at least, reduction of the cost of transportation upon Coal would afford to the whole Schuylkill region.

No one can see so clearly into the future with the existing and projected enterprises and foreshadowed competition, connected with the production and transportation of Coal, as not to be influenced in some measure, by what appears to be rational doubts, relative to any permanent calculations or results, in relation to even so favorably located and substantial a Company as the Reading Railroad, with a continuance of its existing policy. Hence, to be true to itself, nothing should be left by it to chance or doubt; but it should, on the contrary, determine upon, arrange and consolidate a policy which will defy competition—practicable, I think, but in the way I have suggested, and which if adopted, will indicate wisdom relative to all concerned, for the future.

PHILADA. *Aug.* 17, 1857. A. G.

We have no hesitation in answering the query of our correspondent by stating that if the Reading Railroad would carry Coal from Mount Carbon to Port Richmond at $1 00 per ton, no other Region could compete with Schuylkill County in the Coal trade—or at least retard its prosperity. We also feel confident that if the Company would adopt that policy as a permanent one, it would give such an impetous to the prosperity of not only Schuylkill County, but the whole valley of the Schuylkill, and would build up an immense trade, which would give both companies as much business as they could accommodate. It would also largely increase the merchandize and Passenger traffic on the road, which pays better than the transportation of Coal, and would give a permanent value to their property.

THE following communication was intended for last week's *Journal*, but was crowded out. The writer is correct with regard to the difficulties connected with mining, which has made it so unprofitable to our Operators. The incidentals connected with so precarious a business as mining, particularly below the water level, has always been estimated too low.

As regards the low rate at which Coal is mined in the Wilkesbarre Region, we know from experience that the expenses in all new regions, where the business of mining is on a comparatively limited scale, are less than in the older regions. Notwithstanding the low rates at which Coal is now mined in the Wilkesbarre region, (where the business is more depressed *now* than it is even in Schuylkill county,) they will find that as the trade is extended there the expenses of mining will also increase. Such is the case already, as some of the contractors who undertook to mine Coal at the cheaper rates, have been forced to give up their contracts.

The writer is correct in stating that the veins are less faulty in the Wilkesbarre region than in the Schuylkill. Our large White Ash veins, although however, more regular than the Red Ash. The can mine also with less timber than is used Schuylkill county. They are not so favorably located with regard to the markets as Schuylkill county is, when those who control the transporting facilities adopt wise policy of fostering the trade on which they depend, by adopting a low scale of tolls, which increases production and population, and largely extends the carrying business of the Companies, in all its different branches;

MESSRS. EDITORS:—I am willing to rest under the imputation of selfish motives in writing, provided I can direct attention to the cause of so much embarrassment in the Coal Trade. As soon as that is ascertained a remedy will follow as a natural consequence, as no men are willing to devote their time, talents and family interests to an unprofitable business.

Why do the merchants and mechanics in your region prosper, even in the most depressing times, with your operators? Simply because they can mathematically demonstrate their exact position as it regards the price of the article they deal in, their expenses of rent, clerk hire, sources of profit and chance of loss, which enable them to shape their business to the exigencies of the times, and as a result, can keep comfortable from such prudent calculations.

Not so with the operators; there are so many contingencies in the business that it has defied the most correct mathematician among them to tell the probable result of even a few months business. Suppose an operator, after an expenditure of several thousand dollars, has his mines in order to ship coal, and his ideas fixed regarding the cost of delivering it at the point where he can realize from it; he sells at an advance of say 25 cents per ton, which on 1000 tons per week would soon remunerate him for his outlay! A golden dream; but bye and bye au occurrence, "not in the bil s," takes place; an air course is needed, that will cost $1000; some of the machinery breaks which requires money and time to repair; then to cap the climax, the miners run into a rock or dirt fault, and thus, while the quantity of coal decreases the expenses increase, leaving him minus—his hopes and aspirations proving an exciting deception—this is the rule, not the exception, as your operators are well aware.

The consumers are not interested in those things and will buy coal below cost as long as they can get it without even thanks; when a community are laboring under an evil and the remedy rests with themselves, it should not take long to put it right.

In this region the operators have generally been more successful, and the cause is very apparent to the most prejudiced observer; the principal one is the uniformity of the coal in the mines, enabling them to realize a certain, although it may be, a small profit; they have mined coal and delivered it in boats or cars as the case might have been, at what you would deem a fabulous price, and yet "lived to tell the tale." LUZERNE.

WILKES-BARRE, *August* 10, 1857.

WE have received the following Circular from the Delaware and Hudson Canal Company, announcing an advance of 20 cents a ton on and after the date, with no prepared Coal for sale.—It appears that our informant was in error in stating that this Company had "arranged to decrease their supply of Coal"—that the decrease arose from other causes beyond their control—and they have accordingly advanced their prices to make up for the deficiency of supply:

OFFICE OF THE DEL. & HUDSON CANAL CO.
29 William St., cor. Exc'ge Place.
New York, 15*th August*, 1857.

DEAR SIR:—This Company deems it proper to inform its customers and correspondents, that it is not correct, as has been stated in several prominent newspapers, that this Company had "arranged to decrease their supply of Coal this year about 20 per cent." On the contrary their aim has been to bring to market not less than they brought in 1856. The heavy rains of the season, and the scarcity of laborers have so far prevented it.

In view of the shortened supply, and consequently increased cost of production, they have advanced the prices of their coal (on and after this date) to the following rates, viz:

Furnace Lump,	$4 20	Cash, per ton of 2,240 lbs.
Steamer Lump,	4 20	
Grate,	4 40	

Deliverable at Rondout, as usual.

The smaller sizes being already covered by contracts, and arriving in limited and irregular quantities, *none can be offered*. Should any of them be left over, the prices will be $4 50 for the Egg, $4 60 for the Stove, and $3 70 for the Chestnut, deliverable also at RONDOUT, on board of vessels.

Customers who have contracted under the circular of April 28th, will still be entitled to receive a full monthly proportion of their LUMP COAL, from the opening of the CANAL to the close of RIVER NAVIGATION, in accordance with the prices and conditions of purchase; and Contractors for other sizes under that circular, are reminded that those who wish to secure what remains due to them, at circular prices, must be ready to receive it on board vessel as it arrives at Rondout.

Respectfully,
ROBERT SOUTTER, *Vice Pres't.*

The Pennsylvania Company are also falling behind last year's shipments, we presume from the same cause—and we suppose they will also advance their prices, if they have not already sold as much Coal at the low rates as they can deliver. The Managers of this Company, we learn,

ANOTHER DREADFUL COLLIERY EXPLOSION IN ENGLAND—FORTY LIVES LOST.—The Manchester papers of August 8th, contain the following:

Shortly after one o'clock on Friday afternoon, an explosion took place in a coal-pit near Ashton, by which it was at once apprehended that more than thirty persons must have lost their lives, and there no longer exists any hope that the estimate was an exaggeration. This deplorable accident occurred at the Heyes Colliery, within half a mile of Ashton Town Hall. There are five seams in the colliery, but only two of them lately have been worked, and these are distinguished as "the two feet mine," and "new mine." There are three shafts, one up-cast and two down-cast. At six o'clock in the morning, about fifteen men descended to work in the two-feet mine, which is 165 yards down, and another party whose number was between 30 and 40, descended the No. 1 down cast shaft, to work in the new mine, which is 225 yards down. There appears to have been not the least alarm until, at the time stated, the neighborhood was thrown into consternation by the noise of an explosion in the No. 1 down east shaft, which shook the houses near the pit, and was for a considerable distance around heard. Almost at the same instant, an immense quantity of smoke and dust was shot up with such force as to break the iron plating at the mouth of the pit.

The men who had been working in the two-feet mine ascended by the No. 2 down-east shaft as soon as they heard the noise. Great numbers of people were immediately attracted to the spot, and amongst them were a number of men from the neighboring collieries of the Fairbottom Company, and of Messrs. Lees, who at once proposed to descend the No. 1 down-east shaft to the new mine, in which it was feared that all the works had perished. Under the superintendence of Mr. Pearce, the manager, and Mr. Garside, the underlooker, preparations were promptly made for stopping up the various openings and restoring the air-currents. As soon as possible Mr. Garside decended with a party of volunteers, including several of those who had escaped from the two-feet mine. They were supplied with materials for stopping up the openings of the workings, which the explosion had deranged. At the top of incline they found the engineer still living, but severely burnt, and he was conveyed home. It was found impossible to make very rapid progress along the incline, but by about 9 o'clock at night the underlooker and his assistants had penetrated about 250 yards, searching the workings as they proceeded, and had found the bodies of five men.—Further advance was suspended for several hours, by the necessity which became apparent of carefully retracing the ground already passed over, to take additional precautions against the escape of the after-damp through the openings. About half past eight o'clock Mr. Dickenson, inspector of mines for the Manchester district, arrived at the pit, and remained there during the night, expressing himself satisfied with what had been done to recover the bodies.

The difficulty of clearing a passage farther was very great, but the number of volunteers augmented, and the most energetic exertions have been made; the result of which is that seventeen bodies had been recovered by 9 o'clock on Saturday evening. Elliott, the engineer, is still alive, but it is doubtful whether he will recover. Another man is reported to have been hurt severely, but not fatally. Ever since the moment of the explosion, the ground near the pit has been thronged by hundreds of people. There have been sad assemblages of anxious inquirers and of mourning relatives, and the scene has been one of distressing excitement. Nothing is yet mentioned to give a clue to the cause of the explosion. A number of lamps have been found, but all of them were unopened. The shaft was sunk in 1823, but the mine had then been worked for 30 years from one of the other shafts. By 4 o'clock on Sunday afternoon 31 bodies had been recovered from the pit, and as eight persons are are still missing, the estimated number of lives lost is now increased to 39. There are still 40 men constantly engaged in exploring the mine, and it is thought probable that the whole of the bodies may be recovered during the night. The greatest precautions are necessary to avoid the after damp, but there is otherwise not much danger.

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500 00
500 00

for boarding
260 00
eaving shop, 750 00
250 00
f inspectors,
250 00

13210 00

Carried forward,

Bro't forward,

State-Prison Guard.

Isaac Crandall, captain, his pay,		3
19 guards, at $18 per month, for 12 months,		41
Clothing, &c. exclusive of arms, which are drawn from state arsenal,		11
		53,819 17
From this amount deduct 1 month's rations received in 1822, but paid for and charged in the accounts of this year 1823,	1057 48	
1 month's hospital stores, do	133 33	
		1190 81
Being the aggregate of all charges against the state-prison for the year ending 31st October, 1823,		52,628 56
or $86.56 each man.		

From this amount deduct income accruing from the labor of the convicts, and othe sources, within the year, viz:

Weave Shop.

Inventory of weave shop taken 31st October, 1822,		9000 04	
Charges for the year,		6846 65	
		15846 69	
Credits to weave shop for do	14672 80		
Inventory 31st October, 1823,	9183 16		
		23855 96	
Leaves profit,			8009 27

Dye Shop.

Inventory 31st October, 1822,		1717 29	
Charges for the year,		2255 70	
		3972 99	
Credits for the year,	1881 52		
Inventory 31st October, 1823,	2359 42		
		4241 94	
Leaves profit,			

Shoe Shop.

Inventory 31st October, 1822,		1	
Charges for the year,		2	
		3	
Credits for the year,	9043 07		
Inventory 31st October, 1823,	1381 39		
		10	
Leaves profits,			

Carried forward,

The Use of Coal for Locomotives.—For several months past the President of the Philadelphia and Baltimore Railroad has had running between the two cities a coal burning locomotive, for the purpose of testing the practicability and economy of coal as a fuel, over that of wood. The engine used is of the largest class, and furnished with Dimpfel's boiler. The experiments made with it from April 14th to Sept. 30th, 1857, inclusive, resulted as follows:

Number of miles run,	17,092
Coal consumed,	488 845 pounds.
Wood used for kindling,	20¼ cords.
Water used,	4,142,286 pounds.
Water evaporated to 1 lb coal,	847 "
" " per mile,	24,224 "
Coal consumed " "	2,860 "

The coal cost $1,069 35, and the wood $78 98, making a total of $1148 33. The coal cost, per mile, $6 25, and the wood 34 cents, making the total cost $6 71 per mile. The cost of running the same train with wood for two weeks in May, 1856, when an exact account was taken, was $12 40 per mile. In the train run by the coal burner there was an average of 9 cars, and in that by the wood burner an average of 7½ cars. The train was in both instances the one o'clock express from Philadelphia, and the night train from the Susquehanna to Philadelphia.

THE MINERAL WEALTH OF ENGLAND.—When we reflect on the fact that British miners have been searching our native rocks for metalliferous minerals since the days when the merchants of Tyre supplied the ancient world, and that we are now drawing from the earth annually metals alone which have a market value of £20,434,270, we cannot but be struck with the enormous amount of mineral wealth which has been stored in the rocks of these "far islands of the West." From the "Records of Mining and Metallurgy," we learn that coal has been worked since 1234 in Northumberland; but at that period the quantity of fossil fuel raised must have been very small. In the report of the committee of the House of Commons, the consumption of coal in Great Britain in the year 1827 is stated as 22 700,000 tons; in 1856, according to the "Mineral Statistics," it had increased to 66,645,450 tons. The coal fields of the United Kingdom have been estimated to contain an area of 12,000 square miles, and various are the estimates which have been made to determine the time required to exhaust them. Little reliance can, we suspect, be placed upon any of these computations; but one thing is certain, the coal beds of Great Britain are not inexhaustible, and with the falling off in the supply of fuel, the staple manufactures of the country must decline, and England must sink from her high estate to the position of a third or fourth rate State among the nations. Nearly 67,000,000 tons of coal are now raised from our collieries, which, in 1856, numbered 2,829, and in every part of the country the price of coals is advancing. France is opening her ports to receive British coals; Denmark, Prussia, Italy, and Russia are our customers for both coals and coke. Egypt and the East Indies, the United States of America, Chili, Brazil, and China, are regularly receiving our fuel, in quantities varying with each country annually from 53,000 tons to 250,000.—*Athenæum.*

62.

63.

Coal Burning Locomotives on the New Jersey Railroad.

The annexed extract from the report of the New Jersey Railroad, just published, gives the experience of that Road in burning Coal in their express engines:

Cost of Fuel per mile—Coal and Wood.—Among the various efforts to introduce economy in the operations of the Company, the subject of fuel has engaged considerable attention. One of the most approved Coal burning machines, of Boardman's patent boiler, built by Wm. Mason & Co., of Taunton, Mass., called "Phœnix, No. 24," was placed on our road last summer, and about the same time a first class and superior locomotive constructed for burning wood with economy, by Rodgers, Ketchum & Grosvenor, of Patterson, N. J., named "Gov. Pennington, No. 25," was also purchased, and the two engines have run the Philadelphia Express and Mail trains in fair competition, with a view to ascertain with exactness the relative cost per mile of Coal and wood as a fuel. The performances of each engine has proved quite satisfactory, and the result exhibits the comparative cost of Coal and wood (estimating the former at $6 per ton, and the latter at $6 per cord,) to be 10 64-100 cents per mile for Coal, and 15 14-100 cents per mile for wood, being an increased expense of 50 per cent. for wood over Coal. This is shown more in detail as follows:

	Miles run by			
Fuel-Coal.				
1st test,	3			
2d test,	2			
3d test,	5			
4th test,	4			
Total.	1			
Fuel—Wood,				
1st test,				
2d test,				
Total,				

From ... lation ... year by ... run, th... cost p... while ... excee... result ... less c... isfact... burn... mov...

Th... whether ... (though usually ... mode of conducting our work, ... differ, and it is believed that at no distant ..., rigid economy, and the advancing improvements of Coal burning locomotives, the cost of Coal per mile run will not exceed ten cents, assuming the price per ton to be from $5 to $6. In the purchase and preparation of fuel, as, indeed, in all matters connected with the practical working of our railroad, it is more advantageous to the company, if faithfully done, to provide for itself, and to have the different departments for superintending labor and supplies under one administration, rather than divided with outside contractors.

*Kindlings actually cost 96-100 cts. per mile, say 1 ct.

A Valuable Improvement.—The Massachusetts railroads seem to have at last realized what has been so long sought—a coal burning locomotive, which consumes all the gas it distils, saves more than half the expense of fuel, manifests no disposition to burn out her fire-box, and is as reliable as any wood engine for a uniform pressure of steam, at any desirable amount. The Railway Times of Boston says there is no mistake in the matter, and that the woods may now grow, for the coal burning problem is solved. If so, we shall hear more about it.

The Number of Locomotives running in the United States at the present time is estimated to exceed nine thousand. The proportion of engines to length of road will average one to every three miles; for while some of the Western roads have but one to every five or six miles, many others, like the Erie, New York Central, Baltimore and Ohio, &c., have one for nearly every two miles.

...ward,

...Manufactures.

		8435 39		
		1369 29		
		9804 68		
	7372 23			
	6646 30			
		14018 53		
			4213 85	
			19103 98	
...individuals by contract,			15826 49	
			34930 47	
...s, after deducting cost of			706 09	
			35,636 56	
		355 73		
...ground,		114 62		
		20 00		
...orse,		88 75		
			579 10	36,215 66
...and receipts at the prison for				16,412 70
...ebts, which the earnings of the ...e prison, falls short of defraying ... the year, ending 31st October,				
...within the year, from the dealings				2,320 46
...es the sum to be made good by				$18,733 16

(C.)

...the Expense of Supporting the Auburn Prison, for ...ber, 1823; exclusive of expenditures and labor applied ...letion of the Prison.

...5 lbs. cotton yarn and box,			$113 25
...ds factory cloth,	2s. 3d.	$2 11	
check for women,	3s. 3d.	1 43	
tow cloth,	1s. 8d.	10 16	
do	1s. 10d.	5 22	
			18 92

...ried forward,

Statistics of the Coal Trade.

Mr. Handel Cossham gave a second lecture on the Statistics of the Coal Trade, at the Bristol Mining School. To those engaged in mining pursuits the subject is most important and interesting, for as a nation we are most deeply interested in its extension and success. A valued writer has said that "coal was to industry what oxygen was to the lungs." Mr. Cossham called attention, first, to the extent of the coal fields in different countries, as given by Taylor and a few others: Of Great Britain and Ireland, 1-10th was coal field; of Spain, 1-52d; of France, 1-118th; of Belgium, 1-22d: of the United States of America, 1-17th; of British North America, 1-4th.—The number of collieries working in the different countries in Europe, in 1855, were—in Great Britain and Ireland, 2,613. In Belgium in 1845, 212 at work and 97 not at work. In Prussia, in 1840, 752 pits. In France, in 1845, 449 pits. It was somewhat remarkable that all the great coal fields were between the Arctic circle and the tropic of Cancer, and that most of them were near the sea or good rivers.

The following facts showed the vast increase in the coal trade in Great Britain: In 1822 the consumption in London was only 1,667,301 tons; in 1856 the consumption was above 4,000,000 tons. In 1819 the shipment of coal for home and foreign consumption was 4,365,000 tons. in 1845 it was 11,254,750 tons. The principal kinds of coal were—anthracite, bituminous, cannel and brown coal. The American and Pembrokeshire coal fields yielded anthracite: it usually contained 94 per cent. of carbon, 2.5 of oxygen, 2.5 hydrogen, and 1 of ashes. The bituminous was used for house purposes, smith's, gas, coke, and to some extent steam purposes; it usually contained about 73 per cent. of carbon, 20 of oxygen, 5 of hydrogen, and 2 of ashes. The cannel coal was found chiefly near Wigan, in Lancashire, and was very largely used for gas making. The brown coal was found in Scotland. Coal varied considerably in weight, amounting in some cases to 20 per cent. in equal bulk of different kinds; as a rule, the anthracite of America was much heavier than the coal of this country, it was found that about 2,000 lbs. of red ash coal was equal to 2,387 lbs. of white ash for heating purposes. The royalties charged on coal in different countries very much effected the profits of coal working; these, of course, varied much under different circumstances. At Newcastle they were from 2d. to 1s. 3d. per chaldron of 53 cwts; the average would be about 4d. per ton. In Wales the royalty would range from about 6d. to 9d. per ton. In the Bristol coal field the average was about 1s. per ton. This was a very great drawback on those engaged in the working of the latter coal field, and no doubt prevented its more extensive development. On the continent this charge on coal working reached as high as one fifth, or even one-third, the value of the produce. The price of coal in England did not exceed an average of from 6s. 8d. to 7s. per ton at the pit's mouth. In France it was supposed to realize from 8s. to 9s. at the pit's mouth. The lecturer noticed many other facts relative to coal, and some with respect to the prices and quantity of iron, all of vast interest and importance, and which we shall hereafter refer to.—*London Mining Journal, Aug. 29.*

The mind of the American reader, from the foregoing, will naturally turn to the coal trade of his own country, and inquire concerning the coal statistics of the United States. And having asked this question, a pause ensues, for, in verity, there are no complete statistics of the coal trade of the United States to submit in response:

True, of the coal trade of eastern Pennsylvania and some other localities, the tonnage of the coal mined and sent to market can be furnished, yet in all that vast region west of the Allegheny mountains, where tens of millions of bushels of bituminous coals are annually mined and consumed, the recorded statistical results are most deficient and unsatisfactory.

Of the hard anthracite coal trade of eastern Pennsylvania—which in this article represents the United States, inasmuch as that is the sole locality wherein hard anthracite is profitably and extensively mined—the following is the table of production in 1856:

Schuylkill region		3,258,356 tons
Lehigh region		1,351,970 "
Wyoming region		1,972,581 "
Shamokin region		137,406 "
Total hard anthracite		6,720,313 "
Semi-anthracite, east of the Susquehanna river:		
Lykens valley	573,799	
Dauphin and Susq. Co.	146,639	
Treverton	73,112	
		793,550 "
Total coal product of Eastern Pennsylvania		7,513,863 "

In middle Pennsylvania, on waters flowing east, a considerable number of tons of semi-anthracite and bituminous coals are mined, in the Broad Top, Farrandsville, Ralston, Barclay and Blossburg regions.

From the Cumberland, Maryland region, the quantity sent to market in 1856, was 719,211 tons. From the crest of the Allegheny mountain westward, in every State to Iowa inclusive, coal is mined and sent to market in boats to all points on the Mississippi river and all its tributaries, and, also, to the ports on the lakes. The bituminous coal shipments from Pittsburg during the current year, to September 1, reached 21,721,552 bushels; while from points on the Ohio river and its tributaries below Pittsburg, it is estimated that, to the same date, there have been sent to market 3,000,000 bushels.

For the year ending August 31, 1857, there were received into the city of Cincinnati, for consumption in that city 14,500,000 bushels of bituminous coal.

Into the city of Cleveland in 1856, there were received of bituminous coal, 255,108 tons.

In the States of Ohio, Indiana, Michigan, Illinois, Iowa, Missouri, Tennessee, Kentucky, and other contiguous States, bituminous coals abound in localities easily and cheaply accessible by

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MR. DALLAS AND MR. CRAMPTON.—Mr. Crampton, the late British minister to this country, is said to have recently treated our ministe in London quite rudely. The Washington corres pondent of the New York Times says:

It appears that Mr. Crampton repeatedly and in securing a native Hindoo dynasty now, it will be the first they ever had.—*Albany Journal, October 7.*

Bro't forward,

nary.

1 ream ruled paper, 13 50

lls of sundries, articles

12 37½

ills, quantities not sta-

6 25

pencils do. 6 57

reams of paper, 8 50

6 25

ooks of visiting cards, 7 50

xs, 1 50

contracts, and ruled

16 53½

78 98

Oil.

s. candles, 16 25

Steel, Cook & Co. for oil, 0 84

J. Spencer & Co. for 231 galls. oil, at 4s. 115 75

Transportation from Albany to Auburn, 16 25

132 00

Deduct sold and credited, 28 12

103 88

Allen Worden, 100 lbs. candles, 12 50

E. & E. Weed, cartage of oil from canal, 1 00

John Spencer & Co. 194 galls. oil, at 4s. and cartage, 97 94

232 41

Walter Weed, for 2 hall reflecting lamps, 3 25

Soap and Brooms.

Cash paid Amos Underwood, 138 lbs. hard soap, 17 25

E. D. Hudson, for 6 bbls. soft soap, 12 00

Myron C. Ried, 2 bbls. do 3 75

Watson Hall, for 2 doz. brooms, 2 81

35 81

Fuel.

Cash paid for 537 cords 22 feet firewood, 579 02

Rations.

Cash paid for 14412 rations, at 4 cts. to David Aikin, from 31st October to 31st December.

11822 do at 4 cts. to do from 31st December to 16th February, 1823.

12144 do to do to 10th April.

38378 rations, at 4 cts. 1535 12

54403 do to Isaac Smith, from 10th April to 31st October, 1823, at 3 cents 6 mills, 1958 51

3493 63

Cash paid Orson Bennet, for rations for convicts in the hospital, from 1st Nov. 1822, to 31st Oct. 1823. The number of rations not stated, nor the prices, on the books, but charged at 251 90

3745 53

Carried forward,

---

the absence of such a regulation—which ywhere observed, would soon comprise *an rican statistical coal system*—we would gladly take to compile a statement of American mined and sent to market, if the incumbents e higher State offices, in whose departments may be, perhaps, a clerk whose time is not s occupied with the service of the State, l depute such subordinate to address proper ns in the mining regions, requesting them to rd a statement or estimate of the quantity of produced in said respective regions, which re- coal statement [illegible] lished in the United States.

Meantime, information of quantities, &c., from companies and individuals on this subject will be promptly received and suitably noticed.—*United States Railroad and Mining Register.*

Bro't forward,

Hospital.

Medicines and hospital stores purchased by the agent, exclusive of provisions, 179 56

Miscellaneous Charges.

Cash paid John Spencer & Co. for 1 stove and pipe,				36 00	
Walter Weed, for sundries, particulars not entered on the books, and bill left with comptroller,				11 25	
Arthur St. John,	do	do	do	7 98	
Eliezer Hill,	do	do	do	2 04	
Steel & Cook,	do	do	do	8 44	
John Spencer & Co.	do	do	do	6 81	
Walter Weed,	do	do	do	2 21	
Do	for 2 razors,			2 54	
Do	for 2 razor straps,			0 54	
James Fitch, for 2 razors,				2 25	
C. H. Coe, for 45 loads of manure, for prison garden,				11 25	
A keg of powder for guard-house,				8 00	
				99 31	
William Butley, for 1 doz. chairs, for inspector's room,			18 00		
Wm. Rice & Co. for baize and nails to cover table,			1 84		
				19 84	
Cash paid to 13 discharged convicts,				29 50	
Agent's expenses to Albany,			30 75		
Do	to New-York,		51 37		
				82 12	
Postage bill for the year,				40 41½	
Stable Expenses.					
Cash paid for hay for prison horse,			24 53		
Do	for oats for the year,		26 60½		
				50 60½	
					321 79
Aqueduct improvements and repairs, the items not stated on book,					34 86
Cash paid Walter Weed's bill, for sundry tools for the use of the prison, but the particulars not stated on the books. Bill of these articles left at comptroller's office,				107 02	
Robert Muir's bill of tools,	do	do	do	8 25	
					115 27
Cash paid for sand and gravel for the prison yard,					103 14
sheriffs for the transportation of convicts from the counties to state prison,					1640 75
					8764 79

Salaries.

Elam Lynds, agent,		800 00	
Charles Parks, deputy keeper,		450 00	
John R. Bodley, clerk,		450 00	
1 John Husk, turnkey, and director in the blacksmith shop,	350 00		

Carried forward,

66.

Bro't forward,		
1 William G. Burn, do. and director in the shoemaker's shop,	350 00	
1 Charles Markham, do. and director in the weaver's shop,	350 00	
1 John Hitchcock, do. and director in the cooper's shop,	350 00	
7 turnkeys without trades, at $350 each,	2450 00	
		5750 00
11		

Guard.

Ebenezer B. Cob, sergeant of guard, at $25 per month,	300 00	
10 privates, at $18 per mo. or $216 per year,	2160 00	
		2460 00
Chaplain,		200 00
Physician,		365 00
		8775 00
Absence and lost time in the officer and keepers, and deducted from their wages,		544 77
		16995 02

Being the whole of the charges of supporting the prison and convicts, excepting expenditures for completing the building; or $54.82 for each man.

From the above sum, there is to be deducted the proceeds from the labor of those convicts who did not labor on the building.

Blacksmiths.

Work done for customers, exclusive of work done for completing building,	965 00	
Deduct charges for the year against this shop,	181 51	
Leaves profit,		783 49

Cooper's Shop.

Work done for customers, and proceeds of sales of their work,	2501 08	
Deduct charges for staves, tools, &c.	1654 10	
Leaves profit,		846 98

Weaver's Shop.

Work done for customers,	1690 99	
Deduct charges,	178 14	
Leaves profit,		1512 85

Shoemaker's Shop.

Work done for customers,	1552 92	
Deduct charges,	157 59	
Leaves profit,		895 33

Carried forward,

Bro't forward,		
Tailor's Shop.		
Work done for customers,	191 07	
Deduct charges,	30 43	
Leaves profit,		160 64
Carpenter's Shop.		
Work done for customers,	874 07	
Deduct charges,	32 64	
Leaves profit,		841 43
Net proceeds of convicts' labor,		5040 72
Deduct lost by bad debts,		220 21
		4820 51
Received for visitors' fees,	1393 00	
		6213 51
Leaving the prison a charge upon the treasury of the state for this year, over the earnings of the convicts,		10781 51

which, divided by 310, the average number of convicts, leaves each convict a charge upon the treasury, over his earnings, of $34.776.

The reason why the earnings of the convicts for this year have fallen so far short of the expenditure, is that so large a proporti n of the convicts were employed on the prison buildings, and kept in the bills, of which no account was kept. But from the best data now to be obtained, if they had been employed at productive labor instead of the buildings, their earnings would have exceeded every expense. See statement, page .

Note. In the summary statement, page , with the gross expenses of the Auburn Prison, there are included, the cost of coopers' stuff, manufactured for sale, and the cost of the tools for all the shops.

The amounts received or charged on the books for articles manufactured from the coopers' stuff; the cost of the tools; receipts from visitors; together with $139.50 received in 1823, on debts which had not been created within the year, are included, and appear in that statement, as the earnings of 1823, after deducting from the earnings of that year, the bad debts accruing in that and the two preceding years, and will account for the difference between the earnings as stated in that table and in the foregoing accounts; the object of which statement, was to shew, in that place, the whole amount of all outlays at the prison, and the sums which remained a charge upon the treasury of the state, after deducting all earnings and receipts at the prison, for the three years, inclusive.

(E.)

The following modifications in the salaries of the officers, guards, and articles of supply for the Auburn Prison, have been deemed to be practicable, and it is proposed that they be made.

1. That six out of the eleven guards be dismissed as soon as the north wing of the prison shall be completed and the gates closed against teams bringing in building materials; having but five, which, it is presumed, are all that can be wanted in a prison which, in every particular, is so strong and secure against escapes as that of Auburn. The saving that will be made by discharging six guards, is* $1296 00

2. Leather for convicts' shoes, it is not doubted, may all be dispensed with, and wooden shoes substituted. The material and making will cost less than making and mending leather shoes, if the leather cost nothing. It cost this year, (1823,) and may be saved, 552 88

3. There was purchased this year, (1823,) about 330 woollen blankets, weighing 907½ lbs. and cost 708 73
men's socks to the value of 95 66
804 66

These blankets and socks, if they had been made by the convicts from the common coarse wool of the country, might have required to make them, 1300 lbs. wool, which, at 30 cts. would have cost $390. Their not having been so made this year, may be excusable, on the ground that so many of the convicts were required on the building, and kept in the cells. Hereafter, the wool may be purchased of our own farmers, and the convicts make blankets and socks for themselves; by which there will be a real, if not a nominal saving, and probably a nominal saving of at least 100 00

$1948 88

4. It is proposed that the salary of the Agent remain the same as it is, for the year 1824, $1000, which is more than it was in the year 1823, by 200 00

5. Six of the turnkeys, or under keepers, ought to be mechanics, to direct and oversee the convicts in the six trades that are carried on in the prison, and their wages ought to be raised from 350 to $400, which is an excess above the present wages of 50 dollars each, or* 300 00

6. The salary of the physician ought to remain as it is for the year 1824, which is more than it was in 1823, by 135 00

7. As there may not in future years be any deductions from the wages of the officers for lost time, the sum which was deducted in 1823, ought to be considered in this estimate—it was 544 77

All which deducted from the estimated savings, 1179 77

Will leave of the estimated savings, $769 11

* The Agent informs us, January 10th, that he did discharge six of the guards as soon as the buildings were completed in November last, including the sergeant, being quite satisfied that their services would not thereafter be wanted. The sergeant's pay being $300, makes up the saving to $1380, in-

stead of $1296. That in consequence of turning into the shops the large number of convicts, who before had been employed on the buildings, it became necessary to employ three additional keepers, for the purpose of instructing those raw hands in the trades, and regulating their general conduct, and at their meals. That their services, he thinks, may not be wanted after the winter months, as the convicts will, by that time, become more expert at their trades, and at which time he intends that the convicts shall eat all their meals in their cells, which they can do without watching, instead of eating them together at the long tables, under the eyes of their keepers. This arrangement will affect our estimate in the manner and to the extent mentioned.

(F.)

SCHEDULE, *shewing such retrenchments as are considered to be practicable, and may be made in the expenditures of the New-York state-prison.*

The horse, cart, and stable expenses for the year ending 31st October, 1823, were		$1090 14	
There is charged, moreover, in the support and clothing account, exclusive of several charges for cartage in the workshop accounts not noticed,		127 82	
		1217 96	
It is proposed to abolish the horse, cart and carriage establishment, and that the agent shall hire and charge all his cartages; which it is presumed, considering the articles required to be carted, will not amount to more than	350 00		
That the agent pay all carriage hire required by the inspectors in their visits to the Prison: That he shall charge and render accounts of the same with the other accounts of the prison, which it is supposed cannot amount to more than	150 00		
		500 00	
By this arrangement, there will be a saving from the expense of these items this year, of			717 96
The 1171 pairs leather shoes for convicts, cost this year and mending them,		1481 18	
It is proposed that the convicts be supplied with wooden shoes made by themselves, which, from good information, will not cost, including the labor of convicts, at rates usually allowed in the Prison for work done by them, more than		281 18	
In this item there will result a saving of			1200 00
Convicts always under cover, may be comfortable without neckkerchief. This item cost this year, and may be saved,			113 15
Straw used for bedding this year, cost		155 23	
Bed-ticking for the same time, cost		411 19	
		565 43	

Carried forward,

Bro't forward,

Straw beds are not used in the Auburn Prison; the convicts sleep on thick husk mats, made by themselves. The husks for making the mats, and labor of the convicts in making them, or a quantity equal to the beds of straw, may be valued at 66 42

The saving will be 500 00

Men's and women's socks cost this year, 644 00

It is supposed that convicts may be comfortable without socks in all mild weather, or at least one half of the year, and that one-half the present expense for that article may be saved. 322 00 322 00

Oil and candles for lighting the prison, cost this year 658 58

It is estimated that the proportion required for lighting the convicts' rooms. is equal to one-third the whole quantity used. The two-thirds applied to other purposes, would be 453 72

If the one-third used in lighting convicts' rooms by night, should be retrenched, the saving is 226 86

The practice of giving the men tasks, and of permitting them to stroll about the yards when their tasks are done, if they prefer it to doing more work and being paid for it, is considered to be a bad one, as it tends to hurrying their work and doing it badly, and to disorderly conduct in the yards. The men should be kept diligently at work, always when out of their rooms, as at Auburn, and the rule of paying for overwork abolished. If it was, the payments for even this would be saving of 94 08

There was 315 bbls. soap purchased for the use of the prison this year—it cost $702.51. The accounts do not shew that the ashes from 601 loads firewood, purchased for the prison, was sold. There would have probably resulted some saving if they had been made into soap—say 50 00

At Auburn, there was purchased 8 bbls. of soap—it cost $15.75, and made the remainder required for the use of the prison, from the ashes made in it.

The medicines and hospital stores, exclusive of provisions or rations, for 12 months, cost 1700 66

Boarding the young physician, 260 00

1960 66

This item, though done by contract, and now at less than formerly, is, compared with that of Auburn, surprisingly large. A supply for the same time there, cost $179.56, purchased by the agent, and they ought not to cost convicts being double to that of Auburn) more than double what they do at Auburn, or 359 12

But allow, say the further sum of 140 88

500 00

It is presumed these medicines could not cost more than this sum, if purchased and ad-

Carried forward,

Bro't forward,			
ministered by a competent physician; and that the services of a competent physician could be obtained at a sum not exceeding double the salary paid at Auburn this year—365 dollars, or	730 00		
		1230 00	
Leave a saving of			730 66
The salary paid to the agent this year, ending the 31st Octobor, 1823, was		1500 00	
Keeper, 1500; deputy keeper, 600; clerk, 600;		2700 00	
		4200 00	
The keeper may be dispensed with, as the Agent may conveniently perform all the duties of Agent and Keeper, as at Auburn. He should live in the prison, and be paid a salary of	1500 00		
Deputy-keeper, salary $700; clerk, $700;	1400 00		
		2900 00	
The saving would be			1300 00
By the modification proposed in the pay and clothing of the guard, there will be			500 00
The dye-shop is not profitable. Should it be given up, the place of the officer who directs it and the weaving, at a salary of $750, may be supplied by a keeper, who should be a weaver by trade, at a salary of $500; under whose care, coarse dyeing for the convicts may also be done. The saving would be			250 00
			$6004 21

N. B. The salaries of Agent and Keeper were lowered for 1824, $250 each, which would leave a saving from that year of only $800.

Being the amount of savings deemed practicable in the present state of the prison.

But was the prison at New-York made as secure as that at Auburn, or a new prison built upon that plan, and the discipline of the Auburn prison introduced under an able keeper, nearly the whole of the guard might be dispensed with, and a saving of at least $4000 more effected in that article.

(K.)

ESTIMATE *of the cost of alteration of New-York prison.*

New-York, October 2, 1824.

GENTLEMEN,

In compliance with your request of 30th ultimo. for our opinions of the practicability of raising on the walls enclosing the New-York state prison, we report, that the walls enclosing the prison would, with the addition of a buttress in every 20 feet, admit of being raised to make the height of 35 feet, and be perfectly safe and strong. The expense of raising the wall, together with

filling up the nook at the northwest corner of the yard, materials, and superintending, would amount to $7150 00

Buildings No. 1, 2 and 3 on the south, and No. 1 and 3 on the north, would admit of 700 cells, built of at least the sizes you mention; and that the expense for materials and superintending would not exceed 29,000 00

Building a workshop against the inside of the walls, 1600 feet in length, and 24 feet width in the clear, and divided by a brick wall into a number of different apartments, with a suitable number of doors and windows, would cost 13,518 00

$49,668 00

The old materials from the walls and buildings now standing in the yard, would, if used towards the erection of the shops, lessen the expense very considerable, as they would all come in use.

Yours respectfully,

THOMAS T. WOODRUFF,
GIDEON TUCKER.

The number of cells being only 550, instead of 700, the expense will be less in the same ratio.

(L.)

ESTIMATE *of the probable cost of building a prison at the marble quarries, on the banks of the Hudson river, to contain 800 cells.*

12,000 perch of stone,		
13,490 bushels lime, at 5 cts.		$674 50
1650 tons sand, at 30 cts.		495 00
130,000 feet lumber, at $1.25,		1625 00
2 tons nails, at $140,		280 00
Glass, putty, &c.		55 00
Iron for 800 doors, at 200 lbs. each, 71 2/5 tons, at $90,		6426 00
Do. for 236 windows, 100 lbs. " 10½ " "		945 00
To make 100 set of tools for stone-cutters and masons, it requires 4½ tons iron, at $90,	405 00	
5 cwt. cast steel, at 22 cts.	110 00	
	515 00	
Add 30 per cent per annum for repair of tools for 2 years,	309 00	
		824 00
36 bush. coal per day for 2 years, or 626 days, at 5 cts. per bush.		1126 80
Blacksmiths' tools estimated to cost		350 00
and $50 per annum for 2 years. for repairs,		100 00
Clothing 100 convicts, first year, at $10 each,		1000 00
Ditto 200 do second do " "		2000 00
Rations for 100 do first year, at 6 cents per diem,		2190 00
Ditto for 200 do second do " "		4380 00

Carried forward,

	Bro't forward,				
Master mason,	2 years, at	$900	per annum,	1800 00	
Master carpenter,	2 "	900	"	1800 00	
Master blacksmith,	2 "	700	"	1400 00	
4 overseers,	2 "	500	"	4000 00	
6 guards,	2 "	216	"	2592 00	
One agent and keeper,	2 "	2000	"	4000 00	
					15592 00
					38063 30
Add 4 additional guards, 2 years, at $216 per annum,					1728 00
Locks, &c.					4000 00
					43791 30

After the calculation was made out, and consulting the keepers, I thought best to add 4 more to the guard, to be sure of perfect safety.

E. LYNDS.

Brought down—being the entire charge of every kind for erecting the prison buildings,		$43791 30
To which add the cost of the materials to be purchased for building a keeper or agent's house,		1467 20
The same for a building to be used as a cooking room for the convicts; a hospital, and its kitchen; an assistant and under keeper's room; an office; a store-room for convicts' clothes, on coming in; another for all new materials in relation to clothing and bedding, &c.		1312 70

The foregoing estimate of $43791.30, includes the labor of the convicts and their expense, materials, &c. for the prison building. The commissioners have deemed it prudent, in order to cover all expense, including the two latter buildings, and such wall as may be required, to add the expense of the 200 convicts and their labor for one more year, say 16000 00

62671 20

The indispensable alterations to the old prison are estimated at	40000 00	
It is presumed the old prison, without alterations, may sell, when the new prison shall be capable of taking in all the convicts, at $50,000, or more; but say it shall then sell for	45000 00	
		85000 00

Which, if the estimates should prove to be correct, will leave a saving to the state, between the alterations of the old prison and what it may sell for on the one hand, and the building of a new prison on the other, of 22429 80

But the land for a site for a new prison, also the transportation of convicts, will cost something. leaving it uncertain to what extent this balance may be abated by these means. But the commissioners are of the opinion, that a new prison may be built for a sum not exceeding the amount of the alterations of the old prison, and the price at which it may be sold without alterations.

74.

(N.)

AN ACT concerning the State Prisons.

I. *Be it enacted by the People of the State of New-York, represented in Senate and Assembly*, That the public building erected in the city of New-York, for the reception of convicts, and the public building erected in the village of Auburn in the county of Cayuga, for the reception of convicts, shall be known by the name and style of the State Prisons of the State of New-York; and that every person hereafter convicted of any offence punishable by imprisonment at hard labor, or by solitary confinement in a State Prison, or by both, shall hereafter be adjudged by the sentence of the proper court, in general terms, to imprisonment in a State Prison; and in pursuance of such sentence, shall be committed to either of the said prisons as hereafter directed, and shall be there received and kept, by the agent of such prison, in pursuance of such sentence, and subject to the discipline by this act directed.

II. *And be it further enacted*, That the officers for the management of the State Prison and prisoners therein in New-York, shall be as follows, to wit; three inspectors; one agent; which agent shall also be the principal keeper, and shall reside in the prison and have room for his family therein, and receive a salary of one thousand five hundred dollars per annum; one clerk for the prison, at a salary of seven hundred dollars; one chaplain, at a salary of two hundred and fifty dollars; one competent physician and surgeon at a salary not exceeding seven hundred dollars; one deputy keeper at a salary of six hundred dollars; and not exceeding sixteen assistant keepers at a salary of four hundred and fifty dollars each; of whom as many as shall be necessary, shall be mechanics conversant with the trades at which the prisoners under their charge respectively, are employed; and such assistant keepers employed as mechanics, shall receive an additional salary of fifty dollars each, yearly.

III. *And be it further enacted*, That the officers for the management of the State Prison and prisoners therein at Auburn, shall be as follows, to wit; three inspectors; one agent; which agent shall also be the principal keeper, and shall reside in the prison and be provided with rooms for his family therein, and receive a salary of one thousand dollars, per annum; one clerk for the prison, at a salary of four hundred and fifty dollars; one chaplain at a salary of two hundred dollars; one competent physician and surgeon at a salary not exceeding five hundred dollars; one deputy keeper at a salary of four hundred and fifty dollars; and eleven assistant keepers at a salary of three hundred and fifty dollars, each; and so many of the said assistant keepers as shall be necessary, shall as aforesaid, be mechanics, and when so employed, shall as aforesaid receive an additional salary of fifty dollars, each yearly; all the aforesaid salaries to be paid by the agent, out of any monies in his hands belonging to the state, not otherwise appropriated. All the said salaries to be paid by the agent out of any monies in his hands belonging to the state.

IV. *And be it further enacted*, That the person administering the government of this state, shall nominate, and with the consent of the Senate, appoint the inspectors of the State Prisons respectively; who shall hold their offices for two years, and may be removable by the senate on the recommendation of the governor; and the said governor shall have authority to fill any vacancies which may occur during the recess of the senate.

V. *And be it further enacted*, That the said inspectors shall have authority to appoint the clerks, chaplains and physicians and surgeons for the said prisons respectively; all of which officers shall hold their offices during the pleasure of the said inspectors, and may be removed by them, and others appointed in their stead.

VI. *And be it further enacted*, That the commissioners hereafter provided for, shall appoint the agents of the said prisons respectively, who shall hold their offices during the pleasure of the said commissioners: and the said agents shall have the appointment of their deputy keepers and assistants respectively.

VII. *And be it further enacted*, That no person acting as an inspector of the state prisons, shall at any time be competent, or be permitted to act as agent, nor shall the agents or inspectors, or any other officer or person employed at the prisons be directly or indirectly, concerned in any contract, purchase or sale, for, by, or on account of the said prisons.

VIII. *And be it further enacted*, That the said inspectors and the other persons performing any duty in the said State Prisons, shall be exempted during their continuance in office, from serving on juries and from military duty.

IX. *And be it further enacted*, That the inspectors of the State Prison at New-York, by and with the advice of the mayor of the said city, may remove the convicts in said prison, to such place or places of security in this state, as they shall judge fit; if in their opinion, the approach of any hostile force, the prevalence of any epidemic, infectious, or contagious disorder, or other urgent occasion shall render it expedient and proper.

X. *And be it further enacted*, That it shall any may be lawful for the inspectors of the respective prisons, whenever the physician of either of the said prisons, shall duly report the name or names of any person or persons, who are maniac or insane, to transfer such persons to the Lunatic Hospital in New-York; the directors and managers of which, are hereby directed to receive and confine such persons, according to the rules of the institution.

XI. *And be it further enacted*, That it shall be the duty of the inspectors and agents, whenever and so soon as there shall be a sufficient number of cells provided for the purpose in the said prisons, to keep each prisoner singly in a cell at night and during the day when unemployed; and at all times to prevent all conversation whatever of said prisoners with each other, or with any other person.

XII. *And be it further enacted*, That the inspectors of the respective prisons, shall meet monthly, and as much oftener as they may deem expedient, at the said prisons, and examine generally into the concerns of their respective institutions; and it is hereby made the duty of the deputy keepers, physicians. clerks and chaplains, by report to the inspectors, any matter which they may have observed as requiring correction; either in the conduct of the convicts, their treatment by the keepers, or the general conduct of the principal keepers and his assistants; and it shall be the duty of the inspectors, if in their opinion sufficient cause exists, to recommend to the commissioners herein after provided for, the removal of the agents from their said offices.

XIII. *And be it further enacted*, That the said inspectors shall have authority to decide upon all the contracts entered into for the supplies of the prison and the labor of the prisoners, and may determine upon the fitness of

the persons offering for said contracts, and award such contracts to the persons most competent, and best qualified to render justice to the state.

XIV. *And be it further enacted*, That the inspectors of the state prisons respectively, shall on or before the first day of December annually, transmit to the said commissioners a report, exhibiting a complete and comprehensive view of the transactions of the said prisons during the preceding year; of the number of convicts confined in their respective prisons; of the various branches of business in which they are employed; and the number employed in each branch, and the profits to the state, if any, arising therefrom.

XV. *And be it further enacted*, That the agents of the said prisons respectively, previous to their entering on the duties of their respective offices, shall duly execute a bond to the people of this state, with sufficient sureties to the satisfaction of the inspectors, in the penal sum of fifteen thousand dollars, conditioned for the just and faithful performance of the duties of their offices according to law; which bond shall be filed by the inspectors in the office of the Comptroller of this state.

XVI. *And be it further enacted*, That the whole police of the respective prisons, shall be under the control and management of the agent thereof; and it shall and may be lawful for the said agents respectively, if any of the prisoners under their charge, shall refuse to comply with the rules of the institution, or refuse to perform their daily labor, or shall resist any of the officers of the said prisons in their lawful authority, or shall destroy any of the property within the said prisons, or otherwise offend in the premises, to inflict corporal punishment on such prisoners, by whipping, not exceeding thirty-nine lashes at any one time, or to confine them in solitary cells, for a period not exceeding twelve months at any one time, at the discretion of the said agents; and it shall be the duty of the assistant keepers, and the other officers of the respective prisons, strictly to obey all the lawful orders and directions of the agents thereof, in rigidly carrying into effect, the rules and regulations for the government of the said institutions, and the laws of the state relative to the same.

XVII. *And be it further enacted*, That all the transactions and dealings on account of the said institutions, shall be transacted by and in the name of the agent thereof; and by that name the present agents and their successors in office, shall be capable in law, of suing and being sued, pleading and being impleaded, answering and being answered unto, defending and being defended, in all courts and places, and in all actions and suits, complaints, matters and causes, concerning the State Prisons; and by that name the agent for the time being, shall be and is hereby authorised and empowered, to sue for, prosecute, recover and receive of and from all persons indebted to any former agent of the State Prisons, or to the people of the state, on account thereof, such sums of money as shall be due, or become due, of and from any person or persons; and it shall be his duty to collect and enforce the payment of all debts due to the institution, as soon and with as little expense to the state, as possible: but he may nevertheless, with the approbation of the inspectors, obtain and accept of such security from the debtor, or granting time, as may be deemed most conducive to the interests of the state.

XVIII. *And be it further enacted*, That it shall and may be lawful for the said agents, whenever any dispute or controversy shall arise, relative to any claim or demand, which any person or persons now, or hereafter, may have against the said agents, or any claim or demand which the said agents may now, or hereafter, have against any person or persons, to refer the same to the arbitration of two or more persons mutually chosen by the said agents, or person or persons with whom such controversy may exist.

XIX. *And be it further enacted*, That it shall and may be lawful for the said agents, to take charge of any property in the possession of any of the prisoners, at the time of their entering the prison; and on the application of any prisoner confined in the State Prison to the said agent, requesting him to take charge of his or her property, the said agents are hereby empowered to collect and receive, and sue for, any goods, chattels or money due or belonging to such prisoner, and to keep a correct account thereof, and to pay the amount to said prisoners when released, or to his or her legal representative; first deducting therefrom, the expense which has been incurred in his transportation to the prison and keeping him there, over the value of his work; also such expenses as may have been incurred on his account, by the county in which his conviction was had, to be paid by the agent into the treasury of the said county; and if such prisoner should not be released, and if no legal representative should demand such property, then and in that case the same shall be applied to the use of this state.

XX. *And be it further enacted*, That it shall be the duty of the said agents, to keep a regular and correct account of all monies received by them, on account of their respective prisons, from all sources or means whatever, and of the sums paid by them, to whom and to what purpose, and to make out and deliver to the inspectors at their monthly meeting, a return of all monies received and paid by them respectively, on account of the prison, during the preceding month, specifying from whom received and to whom paid, and on what account; and the said agents shall annually close their accounts on the last day of October in every year, and on or before the first day of December thereafter, render to the Comptroller a full and true account of all monies received by them, on account of the State Prison under their charge, and of all the monies expended by them for the use thereof, with sufficient vouchers for the same; and also of an inventory of the goods, raw materials and property of the state on hand, exhibiting a complete detail of the transactions of the prison for the year; to all which accounts there shall be an attestation on oath by the agent and the clerk of the prison, that the said accounts are correct and true in every respect, to the best of their knowledge and belief, to be taken before a judge of the court of common pleas of the county, in which the respective prisons are situate.

XXI. *And be it further enacted*, That it shall be the duty of the said agents respectively, annually, on or before the first Tuesday in February, to make a report to the Secretary of State, of the names of all the convicts pardoned or discharged the preceding year, from the said prisons; the crimes for which they were convicted; the length of time for which they were severally committed; the counties in which they were tried; the ages and descriptions of their persons; and in cases of pardon, the time unexpired at the date of their discharge; of the term for which such convicts were respectively sentenced, when such pardons were granted; and the conditions, if any, upon which they were granted, together with the number of times they have been imprisoned; and the Secretary of State shall, on or before the first Tuesday of May in each year, transmit a copy of such report, to each of the county clerks, to be deposited in their offices.

XXII. *And be it further enacted*, That all monies, drawn out of the treasury of this state, by the agents of the respective prisons, and all monies received by them, for and on account of said prisons, shall be by them forthwith deposited in some bank in which the treasury deposites of the state are made, to the credit of the agent of the State Prison; and all accounts for the purchases and supplies for the use of said prisons, and all other expenditures in relation thereto, shall be approved by at least one inspector, before the same shall be allowed; and all checks for the payment thereof, shall be countersigned by an inspector, and contain the name of the per-

son for whose account they are drawn, before the same shall be paid at the bank; and it shall be the duty of the clerk of the prison, carefully to preserve such original accounts, and always to enter them at large, in books to be provided for that purpose; and whenever any supplies for the prison shall be purchased, it shall be the duty of the agent, to take bills thereof at the time of such purchase, and the clerk shall compare such bills with the article delivered at the prison, and if found correct, shall enter them in books to be provided for the purpose.

XXIII. *And be it further enacted*, That it shall and may be lawful for the said agents respectively, under the direction of the inspectors, to purchase such raw materials as they may deem necessary to be manufactured and used by the convicts in the said prisons, to be paid for by the said agents, out of any money in their hands belonging to the state.

XXIV. *And be it further enacted*, That it shall be lawful for the said agents at their discretion, to furnish a bible to each prisoner confined in their respective prisons; the expense to be audited by the Comptroller of this State.

XXV. *And be it further enacted*, That in case any prisoner confined in any State Prison, or place of criminal confinement within this state, is considered an important witness for any criminal prosecution, by the district attorney conducting the same, it shall and may be lawful for such prisoner to be produced as a witness by a *habeas corpus* for that purpose; and that such prisoner may be examined on trial, and shall be considered as a competent witness against any fellow prisoner, for any offence actually committed while in prison, and while the witness so offered shall have been confined in such prison in which such offence shall have been committed; and all writs of *habeas corpus*, to be granted on behalf of any prisoner confined in the State Prison, shall be directed to, and returned by the agent of said prison for the time being.

XXVI. *And be it further enacted*, That it shall be the duty of said agents, at all times hereafter, to receive into either of the said prisons, on the order of the person administering the government of this state, any person or persons who shall be convicted of any crime punishable with death, where such confinement is made a condition of the pardon.

XXVII. *And be it further enacted*, That it shall be the duty of said agents, to attend both day and night at their respective prisons, except when performing some other necessary duty connected with their office, and to view and have a general superintendence of all the business and concerns thereof; to give the necessary directions to the keepers; and to examine whether they have been careful and vigilant in the discharge of their several duties; and to examine daily into the state of the prison, the health, conduct, and safe keeping of the prisoners; and to use every proper means to furnish them with employment, the most beneficial to the public, and the best suited to their various capacities.

XXVIII. *And be it further enacted*, That it shall and may be lawful for the said agents, to pay to such convicts as may be discharged from the said prisons, either by pardon or otherwise, such sum of money as the said agents respectively may deem proper and necessary: *Provided* the sum paid to any one convict, on his discharge as aforesaid, shall not exceed three dollars.

XXIX. *And be it further enacted*, That the agents, keepers and other officers of the respective prisons, shall support themselves from their own resources, and receive no perquisites or emoluments for their services, except the salaries given in and by this act; that the agents shall keep their of-

ces and reside with their families at the said prison, and shall be furnished with fuel from the stock provided for the use thereof by the state; and it is hereby declared an offence against the state, for the agents of the said prisons, or any of the deputy or assistant keepers, or other officers thereof, or persons employed in or about the same, to convey out of, or bring into the prison, any letter or writing to or from any prisoner, or to introduce into, or give away, or barter, or sell within the said prisons, any spirituous or fermented liquors, or any other thing whatsoever, without being examined and permitted by the inspectors of the said prisons respectively.

XXX. *And be it further enacted*, That the inspectors and agents of the respective prisons, together with the said commissioners, or a majority of them, shall have authority from time to time, to make such rules, or amend those that are made, for the interior government and regulation of the said prisons and the convicts confined therein, as they may deem proper, not inconsistent with the laws and constitution of this state, or the intention and true meaning of this act: That the rules adopted for the State Prison at Auburn, as presented by the inspectors to the legislature, on the seventeenth of January one thousand eight hundred and twenty-three, be the present rules for the government of the said prison, subject to such alteration and amendment as the persons authorised by this act, shall deem necessary; and that similar rules, so far as the constitution of the prison and the number of convicts confined therein will permit, be adopted as soon as may be, for the internal government of the State Prison at New-York.

XXXI. *And be it further enacted*, That the clothing and bedding of the convicts, who shall be sentenced to imprisonment in the State Prisons, shall be of coarse materials, manufactured in the respective prisons, and the prisoners shall be sustained upon a sufficient quantity of inferior, but wholesome food; and that the said prisoners shall be supplied with provisions and hospital stores by contract, annually to be made and entered into by the agent, under the direction of the inspectors, with such person or persons as may be willing to do it on the lowest terms, at a fixed price per diem for each person so imprisoned; the articles of food and quantities of each, to be ascertained and determined by the inspectors, and to be inserted in such contract; and so many rations shall be furnished and delivered at the prison, as there are convicts confined therein, daily, or at such other times as may be agreed upon; and to ascertain who will furnish the supplies on the lowest terms, due notice shall be given by the agent, of the particular supplies wanted, and that proposals will be received until a certain reasonable time for furnishing said provisions and hospital stores; such proposals to specify the lowest per price ration per diem; and the contract shall be made with such person whose terms shall be most advantageous to the state, and who shall be approved by the inspectors, and shall give satisfactory security for the performance of their contract.

XXXII. *And be it further enacted*, That no materials shall be purchased to be wrought or worked up for sale, on account of the state, by the convicts confined in either of the State Prisons; but the said convicts shall be solely employed in working up such materials, or in manufacturing such articles, the materials for which may be brought to the prison by, or for individuals or companies, to whom such materials may belong, to be manufactured at fixed prices, or upon such conditions for the labor bestowed upon them, as may be agreed upon, to be paid by the owner of the goods to the agent of the prison, for the use of the state: and the said agents are hereby required to give public notice in the newspapers printed in the counties in which the respective prisons are situate, that the said prisoners will be so employed; and they shall use all other proper means in their power, to obtain materials for such kind of work as the said convicts are most capable

of doing well, and as will be most for the advantage of the state; in relation to which, they shall follow such regulations and instructions as may be given them from time to time, by the inspectors; and the said inspectors may authorise the said agent to enter into any contract for the employment of the prisoners, or any number of them, with any person who may be desirous of employing such prisoners: *Provided* such contract shall not exceed three years, and as much longer as the legislature shall permit: and *Provided further*, that securities are given by the contractors for the due payment of the sums earned by the convicts, as they may become due; and that no such contract shall contain any thing to impair the right of the state, or of the agent of the prison, in regulating the conduct, management and punishment of such prisoners.

XXXIII. *And be it further enacted*, That it shall be the duty of the physicians of the respective prisons, to keep a register of all the sick convicts placed under their care, stating the disease with which they were afflicted, and the date of their entering and leaving the hospital; also a register of all the deceased convicts, stating their names, ages, places of birth, time of death, disease, and all other circumstances which they may deem necessary; which register shall always remain at the prison and be open to inspection.

XXXIV. *And be it further enacted*, That whenever a convict shall die in either of the state prisons, it shall and may be lawful for the inspectors to deliver such dead body, if at the prison at Auburn, to the agent of the college of physicians and surgeons of the western district of this state, unless the said body shall be removed and taken away for interment in twenty-four hours after the decease, either by the friends and relatives of the deceased, or by their agent employed for that purpose; and if at the prison at New-York, then to the agent of the college of physicians and surgeons of the city and county of New-York, unless removed as aforesaid.

XXXV. *And be it further enacted*, That from and after the passage of this act, no convict shall be recommended by the inspectors or other officers, for pardon from either of the state prisons.

XXXVI. *And be it further enacted*, That if any person who shall have been ever convicted of any offence punishable by imprisonment in the state prison, shall be a second time or subsequently convicted of any offence so punishable, whether it be of a like nature of the former offence or not, he or she shall be confined in the state prison for life.

XXXVII. *And be it further enacted*, That a former conviction in any of the United States, for any offence punishable by the laws of this state with imprisonment in the state prison, shall be considered a former conviction within the meaning of this act, and of all former acts imposing an increase of punishment for the commission of a second offence.

XXXVIII *And be it further enacted*, That the inspectors of the state prison at New-York, are hereby authorised to appoint a guard for the safe keeping and management of the prisoners confined in that prison, not to exceed one captain and nineteen men, who shall receive the following pay, to wit; the captain thirty dollars per month, and the privates twenty-one dollars per month. And the inspectors of the state prison at Auburn, shall in like manner have authority to appoint a guard for the safe keeping and management of the prisoners confined in that prison, not exceeding one corporal and four men, who shall receive the following pay, to wit: eighteen dollars per month; the whole to be paid by the agents out of the monies in their hands belonging to the state; and the said guards shall be furnished from the arsenal of this state, with sufficient arms, ammunition and accoutrements, and shall be subject to the command and direction of the agent

and deputy keepers of the said prisons respectively. That the inspectors of the respective prisons, together with the agents thereof, shall have authority to prescribe and adopt rules and regulations for the government and discipline of the said guard, and may enjoin penalties by fine, for the non observance of such rules, and may also at pleasure, dismiss the said guard, or any part of them, and employ others in their stead.

XXXIX. *And be it further enacted*, That the persons composing the guard for the respective prisons, shall support themselves from the pay allowed them by this act; but the necessary fuel for the use of the barracks, may be furnished by the agents, under the instruction of the inspectors.

XL. *And be it further enacted*, That for the further safety of the said prisons, and securing the prisoners, there shall be formed and organised, from persons residing nearest to the said prisons respectively, and liable to militia duty, one company to consist of one captain, one lieutenant, one ensign, two sergeants, two corporals, one drummer, one fifer, and twenty-five privates, who shall receive arms, accoutrements and ammunition from the public arsenals, giving receipts to be accounted therefor; to be formed and organised under the orders of the brigadier-general of infantry, having the command of the brigade within the district of which the said prisons respectively are situate; and the said company shall constantly keep their arms, accoutrements and ammunition in good order, and be always ready for immediate service, and shall on the first alarm and notice from the agent, repair to the prison, completely equipped, and there aid and assist, under the direction of the inspectors and agent, in the defence of the prison, and to prevent the escape, or any mischief meditated or threatened by the prisoners, or any of them, or danger to the prison from any other cause; and as an inducement and reward to the persons composing the said companies, they shall be exempt from all other militia duty, and from serving on the grand or petit jury, during the time of their being a part of said companies.

XLI. *And be it further enacted*, That it shall be lawful for the commanding officer of the respective companies so raised, or to be raised at New-York and Auburn, to order out the said companies for drill and exercise, not oftener than three times in any one year; and that if the officers of said companies shall neglect their duties, they shall upon being reported to the commander in chief, be dismissed the service; and if any of the non-commissioned officers and privates, shall neglect or refuse to perform their duty, the commanding officer of said companies shall dismiss and discharge them, and enroll others in their stead.

XLII. *And be it further enacted*, That if any prisoner confined in either of the state prisons, or any other prison, shall wilfully and maliciously set fire to either of the said prisons, or to either of the workshops, or other erections within the walls thereof, or procure the same to be done, or aid or abet the doing thereof, or shall be guilty of an assault and battery with intent to commit murder upon any officer of said prisons, such person being thereof convicted, shall be adjudged guilty of felony, and shall suffer death.

XLIII. *And be it further enacted*, That whenever any person shall be convicted and sentenced to imprisonment in the state prison, the clerk of the court in which such sentence passed, shall make out and certify a copy thereof, and deliver the same to the sheriff, who shall convey such convict to the prison, and deliver the said copy with the convict to the agent of the said prison, and receive from the said agent, a certificate of such delivery; and it shall be the duty of the said agent to give such certificate to and in the name of the person delivering the prisoner, whether such person be sheriff of the county where the prisoner was convisted, or his deputy.

XLIV. *And be it further enacted*, That the compensation to be allowed to the sheriffs of this state, for transporting prisoners to the state prisons, shall be as follows, to wit; for transporting one prisoner at one time, the sum of twenty-five cents per mile, and for each and every other prisoner conveyed by him at the same time, five cents per mile in addition to the said sum of twenty-five cents per mile for the single one; and fifty cents per day, for keeping each criminal while on the way to the state prison; which allowance shall be paid by the agents out of the monies in their hands belonging to the state, and shall be in full of all services and expenses in the premises.

XLV. *And be it further enacted*, That all prisoners whatsoever, hereafter adjudged to be confined in the state prison, in the counties of Oswego, Oneida, Madison, Chenango, Broome, St. Lawrence, Jefferson, Lewis, Herkimer, Montgomery, Otsego, Franklin, Clinton, Essex, Hamilton, Washington, Warren, Delaware and Saratoga, and all the counties of this state lying westward of these last mentioned, and betwen lake Ontario, and the Pennsylvania line, shall be confined within the prison at Auburn; and that all those convicted in the remaining counties of this state, shall be confined within the state prison at New-York; the agents of the said prisons respectively, under the direction of the inspectors, shall confine the said prisoners according to their sentences: *Provided*, That when it shall appear to the court rendering any sentence on conviction, that either of the prisons is too full to receive additional prisoners, or likely soon to be so, then such court in any county in this state, may in its discretion, order any convict to the other prison.

XLVI. *And be it further enacted*, That the person administering the government of this state, may, as often as he shall see fit, by written order under his hand, direct either generally or in special cases, that the sheriff of any county may convey prisoners under sentence to a state prison, to either of the said prisons, as the governor shall think proper: but arrangements shall be made by the agent of the Auburn prison, to convey all female prisoners to the New-York prison, at convenient times, and the sheriff of any county may convey any such female prisoner in the first instance, to the New-York prison: *Provided*, That he shall receive no increase of fees; or by order to the inspectors of the state prison at Auburn, the governor may direct any of the prisoners therein confined, to be removed to the state prison at New-York; *Provided* the better employment of the said prisoners, or the punishment and security of their persons, will, in his opinion, be promoted by such removal; and that not less than ten of such prisoners shall be removed at any one time; and that whenever this or a greater number shall be ordered to be removed, the agent shall cause them to be sufficiently chained, two or more being always chained together, and conducted on foot, or transported by water, and deliver to the agent of the prison at New-York, who shall receive them and keep them according to the times of their respective sentences, and in all respects as if they had originally been sent to the New-York prison; and the persons employed to conduct such prisoners, shall prohibit all intercourse between the prisoners and other persons, and may inflict reasonable and necessary correction upon the prisoners for disobedience or misconduct in any respect; and in like manner, and under like regulations in all respects, prisoners may be removed from the New York prison to that of Auburn, and there kept; and the allowance for the sustenance of such prisoners, while travelling, shall be at and after the rate of four cents per mile, including board and all other expenses, for each prisoner by land, and three cents by water; and the expenses of removal in either case, shall be paid by the agents, out of any monies in their hands belonging to the state, of the prison from whence the prisoners shall be removed.

XLVII. *And be it further enacted*, That the persons authorised to visit the respective prisons at pleasure, shall be the Governor, Lieutenant Governor, Members of the Legislature, Chancellor, Judges of the Supreme Court, Attorney-General, District Attorney, and such ministers of the gospel who actually reside in the city of New-York or the village of Auburn, and who shall have charge of a congregation therein; and no other person shall be permitted to enter within the walls where the convicts are confined, except for special purposes made known to one of the inspectors, and without a written license signed by two of the said inspectors.

XLVIII. *And be it further enacted*, That it shall not be lawful for the coroner of the county of New-York, or of the county of Cayuga, to hold an inquest or view, in the state prisons in either of the said counties, upon the bodies of deceased convicts, unless upon the request of the agent of the said prisons, under the direction of the inspectors thereof; and it shall be the duty of the agents and inspectors to call the coroner in all cases of death by casualty,

XLIX. *And be it further enacted*, That two hundred dollars annually shall be allowed for the accommodation of the inspectors of the prison at New-York, while attending to the duties of their office at the said prison, and such further sum as will defray the expense of a carriage in conveying them to and from the prison when on public duty, not exceeding one hundred and fifty dollars; and that there shall also be allowed for the accommodation of the inspectors of the prison at Auburn, while attending to the duties of their office at the said prison, the sum of one hundred dollars: the whole to be paid by the agent out of any monies in his hands belonging to the state.

L. *And be it further enacted*, That it shall be the duty of the Comptroller to examine and audit the accounts of the respective agents, and lay a statement thereof before the legislature annually.

LI. *And be it further enacted*, That it shall be the duty of the said agents, by all proper means, to cause all the expenses of the said prisons of any kind, to be supported wholly, or as nearly as shall be practicable, by the labor of the prisoners: and in all cases of failure, unless when the prisoners may be employed in building, the causes and circumstances thereof shall be particularly reported to the legislature, to the end that such investigation may be had therein as shall be deemed proper: and whenever either prison shall be made completely to defray its own expenses, the commissioners shall report the names of such officers as shall have deserved particular commendation in that respect, with their opinion of such additional allowance, as ought to be made to such officers by way of extra reward.

LII. *And be it further enacted*, That the said state prisons shall be under the general direction and government of a board of three commissioners to be appointed by act of the legislature; which three commissioners, or any two of them, shall appoint the agents, and together with the inspectors and agents of the respective prisons, shall make all such general rules as they shall think fit and expedient for the government of the said prisons, or either of them, and may alter the same from time to time, and the said commissioners shall exercise a general supervision over the government, discipline and police of the said prisons, and over the punishment and employment of the prisoners therein confined, and over the monied concerns and contracts for work, and the purchases, sales and supplies of the articles either to be respectively sold on account of the said prisons, or provided for the same: and that all contracts made either for the work of the prisoners

or for the supplies of the prisons respectively, shall end on the thirty-first of October of each year; and in case the said commissioners shall be of opinion, that the terms offered for the contracts for supplies, whether of rations or hospital stores at either prison, are not sufficiently advantageous to the public interest, they may in their discretion, notwithstanding any thing in this act contained, refuse such contracts, and may direct such supplies to be purchased by the agent, and in such cases, shall state the terms of the contracts offered, and the cost of the supplies provided by the agent, in the next annual report.

ERRATA.

Page 13, line 18th, for *silesce*, read silence.
23, " 24th, for *private*, read prison.
24, " 8th, for *place*, read plan.
27, " 8th from bottom, for *allueed*, read alluded.
31, " 17, for *fame*, read force.
Page 2 of statement B, line 7th, for *county carriages*, read carts and carriages.

85.

THE FIRST RAILROAD AND LOCOMOTIVE.—We are all so accustomed now to railroads, we have been used so long to see locomotives dashing by, that it is difficult to understand the astonishment, awe and often terror with which they were first beheld. We only realize it, indeed, when we think of Crockett's exclamation, as he looked on a train shooting out of the darkness of the night, vomiting fire and smoke.

As with most other inventions, the railroad and locomotive were the offspring of the requirements of the times. In rude and barbarous ages, when there is little commerce or travel, and when every petty community lives almost wholly within itself, the necessity for cheap or rapid transportation is not felt. But when nations become densely populated, and when the arts of civilization increase, good roads, by which to secure quick journeys, grow to be indispensable. To the need of low-priced fuel in London we owe the first crude idea of a railroad. The Newcastle miners, in order to transport their coal more expeditiously from the mines to the wharf, begun to construct, as far back as 1602, wooden paths for their wagon wheels to move in. These grooves were afterwards turned into rails; the rails were covered with iron; finally, about 1703, cast-iron rails themselves came into use. It was not till 1800, however, that stone props were introduced to support the ends and joinings of the rails, by a Mr. Outram, from whom this description of road, the father of the existing railroad, was called an "Outram road," subsequently corrupted into "tram road."

As cheap coal originated the railroad, so cheap cotton called the locomotive into being. It was about the year 1821 that the increase of the cotton manufactures, in and around Manchester, caused such a glut of bales and goods on the canals and roads between Liverpool and that place that the necessity of some new means of transportation became evident to all. It was accordingly proposed to build a railroad between the two cities. It was further suggested that steam-power should be employed on this road. After much opposition from the incredulous, the latter proposition was decided to be not absolutely absurd, and a premium was offered for a locomotive to run ten miles an hour, drag twenty tons weight, weigh not over six tons and carry a pressure of steam not to exceed fifty pounds to a square inch. Fortunately, the man was then living, in England, who had both the genius and experience required for this new invention. This was George Stephenson, originally a cow-boy; then a picker at a colliery; afterwards under-fireman and fireman in succession, and finally an engine-wright, at a salary of five hundred dollars. A self-taught man altogether, more than thirty years old before he rose from the position of a fireman, he was yet the one solitary man in England competent to solve this new and startling problem.

As early as 1812, on his first promotion to the post of engineer, Stephenson had begun to speculate about the possibility of steam-carriages on railroads. The use of steam for this purpose was not entirely unknown. It had been talked of in both America and Europe. Originally the idea was to construct a wagon, to be propelled by steam, for running on ordinary roads. But this was soon abandoned. The first attempt to produce a locomotive, which could be used on a tram road, was made in 1804, by a Cornish engineer, named Trevethick. But the machine was found not to answer. A notion, in consequence, became universal that smooth wheels, if a locomotive was heavily loaded, would slip on smooth rails, instead of turning. Accordingly, toothed wheels, fitting into toothed rails, were tried. One of these rude contrivances was seen by Stephenson in 1813, who immediately declared, with the instinct of genius, that he could make a better. He set to work, accordingly, and produced one, in about a year, which drew thirty tons, at the rate of four miles an hour, up a grade of one in four hundred and fifty. This machine, however, did not satisfy him, so he went to work again and by 1815 had made another, which may be regarded as the original type of the existing locomotive, for it contained the germs of all the improvements which have subsequently been made. In it first appeared "the steam-blast," as it is called, without which the locomotive would never have been practically useful.

When, therefore, the premium was offered by the Liverpool and Manchester road for a locomotive, Stephenson felt himself more than competent to solve the problem. During the interval, for it was now 1828, he had made many improvements in his invention; had taken out a patent for making steam-carriages, and had actually received orders from a few discerning mine-owners to build what he called his "traveling engines." But, as yet, no one, except Stephenson, dreamed of a speed of more than five miles an hour, and when he hinted that fifteen or twenty was possible he was regarded as self-deluded. The first of October, 1829, the day when the trial of the competing engines was to take place, vindicated the inventor's prediction. Of four locomotives entered two were withdrawn, one broke down, and Stephenson's only stood the test. It not only stood the test, but surpassed the expectations of the most sanguine, attaining a maximum speed of twenty-nine miles an hour and an average of fifteen.—The name of this, the first real locomotive, was "The Rocket." From that hour the new era opened in material civilization; distance was annihilated; the world of commerce was revolutionized.

The new seven-million mortgage of the Reading Road is made to Mr. Cullen, the President, and Messrs. Baker and Norris of the Direction. The issue is to provide for the bonds due in 1860, and the floating debt. The bonds bear only six P cent interest, and about one-half are to be issued at once, for the purpose of paying the floating debt, which is over $2 800,000. The bonds are convertible into stock. It was intended to issue them at 75, but it is now under consideration to offer them at 70. The annexed statement is made by the Company:

Stock, common	$9 823,741 22	
Stock, preferred	1,551,800 00	
Stock, reserved	629 347 10	$12,004,888 40
Bonds due in 1860	3 383,400 00	
Bonds due in 1870	3,209,600 00	
Mortgages on real estate	501,950 00	
Total	$7 (94,950 00	
Floating debt	2,822,218 00	
Total debt	$9,917,168 00	9,917,168 00
Total		$21,922,056 40

Representing the railroad and other property of the Company.

The net income of the road, after deducting all expenses and repairs for maintenance of way and perpetuating the rolling machinery, was—

In 1854	$1 010,438 21	
In 1855	2 444 432 76	
In 1856	1,944,722 12	
To Oct. 31, 1857	$1,545,611 55	
Or, for the whole year 1857, about	1,500,000 00	
Making on an average of four years, a net yearly income of		$1,974,893 27
The annual amount required for coupons, after the floating debt has been funded, will be		628,000 00
Surplus		$1 346,893 27

Which affords an ample guarantee for the regular payment of the interest on all the bonds of the Company.

Taking only the present year's limited business, the net profit will show a surplus over the amount required for coupons of $850,000 to $900,000.

There is a first mortgage of $3,236,000 on this road, [illegible] the payment of the bonds of 1870.

TREVORTON COAL is a new variety of Coal that has recently been introduced to this market, which has some peculiarities which entitle it to special mention.

Trevorton is near the center of Pennsylvania, on this side of the Allegbenies, and not far from the Dauphin coal-beds. It is semi-anthracite as that is semi bituminous; that is, it is less bituminous than the Dauphin. It kindles easily and burns freely—in fact, has been lighted with paper alone—so freely that we should hardly consider it a profitable fuel where anthracite may be had as low or lower per ton. But the Trevorton coal is very convenient where only a little fire is required—a quart of it sufficing to make a lively fire—and especially acceptable where a *quick* fire is needed to cook the breakfast of one who must be off to his work betimes. It does not clinker at all, but will burn off the clinker which has fastened upon grate bars during the burning of anthracite—and is purchased for this reason for sea-going steamers. It will doubtless be used extensively if not generally as fuel for locomotives. It has a tendency to pulverize while burning, and should have closer grate-bars than are required for burning anthracite.

PARACHUTE FOR MINES.—The method of descending into mines by ladders is very fatiguing, and in consequence baskets attached to a rope are generally used. Should the rope break, the men in the basket are, of course, killed. Many mining engineers have proposed methods of removing this evil, and among the best is the safety cage of Mr. Fourdriner, of England. A Belgian engineer has recently proposed a kind of cage, so that if the rope breaks, its top will immediately expand in a parachute, and let the men down gently. The only objection to this is that parachutes are not to be depended on, as we know from the accidents that have occurred to many æronauts who have attempted to descend in them.—*Scientific Amer.*

MESSRS LEVI, LANCE AND LOVE, operators in Plymouth, Luzerne county, have offered to pay, with the first coal they get off in the spring, if the township will supply with food the great number of laborers and their families now out of employ during the winter, when they cannot obtain work—a judicious and generous proposition! Nothing can be safer than anthracite coal lands as an investment, as no hard times can lessen their value, but, for many years to come, the more they are worked the more valuable they become. Credit may fail, stocks become worthless, and deposits in other banks be wasted or stolen, but the *inexhaustible* coal or ore bank is not affected by derangements in the currency, or by financial panics. Capitalists see this more and more, and the day is not far distant when an acre of anthracite coal land will be almost as unattainable as a block in the business part of New York or Philadelphia.—*Record of the Times.*

[For the Public Ledger.]

Pennsylvanie Anthracitc Lands.

a time when so much money is idle, when
alists look with distrust on most kinds of in-
ners, when confidence in man seems almost
gone, it may be well to call attention to our
lands. Philadelphia owes her importance
wealth in a great measure to the coal of Penn-
nia: Were the mines of Schuylkill, Carbon
Luzerne not to contribute their products for
ear, who can estimate the baneful influence
l kinds of business and the complete revolu-
which would necessarily follow, not only to
city, but many other parts of the country.
e counties possess within their limits de-
s of coal such as are nowhere else to be found,
which have already become so much used as
a growing indispensable necessity to the
e economy of social business and commercial
The coal of Pennsylvania gives her an ad-
ge over other States and will make them her
aries. In the language of a New York jour-
'It is from this source the largest and securest
nes spring that are to be found in this coun-

This being the case now, in the infancy of
oal trade, what may not be expected in the
e? in Great Britain, the first importance is
d upon this article. Her statesmen attribute
highty power to her coal fields, and her Par-
nts have inquired of the most eminent geolo-
of that country, how long will the supply
the demand? And an English writer on
ubject says:—"It cannot be necessary to point
many advantages which we derive from the
ession of our coal mines the sources of greater
s than ever issued from the mines of Peru or
the diamond grounds at the base of the Neela
a mountains." And another, "that it is the
ssion of coal mines that has rendered these
doms the mart of the world as dispensing
d the richest productions of art and indus-
and "that the vast importance of coal to the
manufactures and general prosperity of our
try renders in all its bearings the trade in
material a subject of deep interest to all who
y estimate the sources of the greatness, com-
ial and otherwise, of the United Kingdom."
e coal trade is of such vast importance to Eng-
it must become hereafter immeasurably more
our rapidly advancing country. In the lan-
e of a late eminent Philadelphian, uttered in
I would ask, "If coal has made Great Britain
she is if this has given her the power over
hundred millions of men and supplied the
ufactures which have made us, like the rest of
world, her debtors, why should not we, with
ist equal advantages, make it the instrument
ur own independence?" In England the cost
ining is far greater than needs be in the
ed States. In one place, for instance, a per-
ticular shaft a third of a mile has been sunk
each a four foot vein of coal; in another, a
t of eight hundred feet, to mine one of half a
in thickness; and at another place, a seam is
ed beneath the ocean, more than half a mile
the shore. Much time is frequently given
en a mine; for example, ten years of continu-
labor have been spent on a coal shaft, at a
of half a million of dollars or more, to reach
all vein—a striking evidence of confidence in
science of geology.

France the difficulties of mining are still
ter than in England. The preliminary works
more considerable, and the labor of digging
coal and bringing it to the surface more ex-
ive. Indeed, numerous facts and instances
ht be adduced, to show that mining in Europe
r more difficult, dangerous and expensive than
us. Our Pennsylvania anthracite is of the
st kind, not equalled by any other. Many of
veins are of great thickness, twenty to thirty
and more, free from serious faults, remarka-
in most places, for the small amount of slate,
the surface, and can be mined, whether by
or shaft, comparatively cheap, and yet our
s, while intrinsically far more veluable than
e of Great Britain, can be purchased at one-
ntieth the sum asked for theirs. When we
lder that, only forty years since, the first ex-
ment to use anthracite as a fuel was made in
erne county—that twenty years ago but little
dug, and that already the production has ex-
ed seven and a half millions of tons annually
hat will the anthracite coal trade of this State
become in the next twenty or even ten years?
common error is, too soon to expect a large
rn from mining. A little reflection will con-
e any one, that from the nature of the busi-
s, no great remunerating result should be
ed for the first three or four years This has
n the case with the most profitable collieries.
t much time, at least, should be ungrudgingly
wed for opening the coal, driving gangways
turning breasts, to make room for a sufficient
ber of men to quarry and prepare any large
unt. Mistakes are often made in selecting
per points for opening, so as to derive all the
l advantages for operating, owing generally,
he want of knowledge and experience in those
have the management.
ining is both an art and a science, and it does
follow that if one has been a successful dealer
ry goods or groceries, an enterprising manu-
urer or mechanic, that he is qualified to over-
and direct a large mining operation. It would
better to let that be done by an experienced
ing engineer. Such are employed in England,
such here could be obtained for far less mo-
than is frequently expected by, and paid
h service to Presidents and other officers of
panies. Money, however, is soon realized
n mining, in much less time in this than in
er countries; and when an operation begins to
, it continues to do so, and all mistakes, er-
, unwise expenditures are soon surmounted
l should be a cash article. Cash is paid for
freight, the wages of the miner, and other
ent expenses, and the wholesale purchaser
uld be required to do so. He gets his money
wn from the consumer, and yet often suspend
l withholds, if not defrauds, the coal operator
only of his profits, but the money advanced to
ne and transport the coal. Unpaid debts are the
se why most who have gone into the busines
ve found it unprofitable. Many of these draw
cks on the trade should, and must be removed,
d then no investment can be found so safe for a
ber to leave his family.

Think of the thousands reduced to dependence, by the failure of banks, in our city and country, where not only the stockholders have lost their all, but sometimes the depositors and the holders of the notes have been losers—of depreciated railroad and other stock, and compare such with the permanency and value of a coal property—any property enhanced in value the more it is worked. Our coal fields are becoming well supplied with railroads and canals, connecting them with growing markets. The Schuylkill and Lehigh regions have several. The Wyoming and Lackawanna have some, and will soon have more. The Lackawanna and Bloomsburg railroad will be completed in a few weeks, and the North Branch extension canal may be relied on for the next season, and after. An engineer, whose services to the State makes his opinion on such matters decisive, lately examined the injury to the horse-race dam, and said he could repair it, so as to fill the canal with water in two weeks.

The unusual floods of the season, so disastrous to New York, north and west, have swollen the Susquehanna and its tributaries almost without intermission, and have delayed repairs, or swept them off before well secured; but such untoward contingencies will not always happen. The canal is an excellent one, and will furnish transportation for half a million of tons of coal, or more, annually. The extension of the Lackawanna and Bloomsburg Railroad to Lanesboro' will, doubtless, in a short time be made. A railroad along the Susquehanna river also, and a gravity one from these valleys to New-York city and others—thus opening the great north and west of our country to these coal regions. True, this trade now suffers, like all others, but it cannot but be temporary. If the thoughts and facts above written, hastily put together, are just, and I think they cannot be questioned, an obvious inference is, that the owners of anthracite coal lands should not hastily part with them. They are increasing in value far more than the interest on cost, and the time is not far distant when they will pass down as heirlooms from those who hold them, from generation to generation. Further uninvested funds could not be placed in better, if so good, property. The area of the anthracite of this State is small, much of it is in the possession of those who need not and will not sell, and the most eligible parts of the remainder will soon be, in like manner, secured. Such lands will not become cheaper, and the present pressure has not made them so.

WILLIAM F. ROBERTS, Geologist.

Philadelphia, Nov. 18th, 1857.

...re dolla...

Coal.—Ere we wrap up this carboniferous integument of the landscape, (says the eloquent Hugh Miller) let us mark to how small a coal-field England has, for so many years, owed its flourishing trade. Its area, as I have already had occasion to remark, scarcely equals that of one of our larger Scotch lakes; and yet how many thousand steam engines has it set in motion—how many railway trains has it propelled across the country—how many thousand wagon loads of salt has it elaborated from the brine—how many millions tons of iron has it furnished, raised to the surface, smelted and hammered! It has made Birmingham a great city, the first iron depot of Europe, and filled the country with crowded towns and busy villages. And if one small field has done so much, what may we not expect from those vast basins laid down by Lyell in the geological map of the United States?

Coal in Great Britain.—A London correspondent of the *National Intelligencer*, noticing the records of mining, says that coal has been worked in Northumberland ever since 1234. The quantity of fossil fuel mined at that early period, was, however, very small. The consumption of coal in Great Britain in 1827 was 22,700,000 tons, and last year it amounted to 66,645,450 tons! This last large amount was raised from 2829 collieries. The coal fields in Great Britain are estimated to contain an area of 12,000 square miles. We can place no reliance upon any of the calculations respecting the period required to exhaust this immense stock, but, remembering the very rapid increase in the consumption of coal, it will be as well also to remember the coal-beds in England are not *inexhaustible*. It must also be kept in view that France is opening her ports to receive British coal, and that Denmark, Prussia, Italy, and Russia are purchasers both of coal and coke. Large quantities are also regularly sent to Egypt and the East Indies, to North America, Chili, Brazil, and China, varying with the several countries annually in different amounts, from 33,000 tons to 250,000 tons. And, again, the wonderful increase in the consumption for the purposes of steam navigation must add a very large item to the demand for and the use of fossil fuel.

[From the Scientific American.]

Fuels, Mineral and Vegetable.

The process of combustion is but an oxydation of the substance being burnt, and the heat evolved is the result of this chemical combination. Any material that is capable of oxydation may be used as a fuel; but as an economical question, we can only usefully employ those which contain a great quantity of heat-making matter in a small space, so we have adopted carbon and its compounds as our every day warmth givers. These compounds of carbon form a wonderful series of bodies—sparkling in the diamond, glistening in graphite, shining in anthracite, transparent as air in carbonic acid, and a fine black powder in soot. The most really economical, in point of heat, is charcoal, which is nearly pure carbon, and is capable of giving out a most powerful heat; it is prepared by heating wood in close vessels, when all the gases, resins and tars distil over, and pure charcoal remains behind. It should retain perfectly the shape and run of the fibres of the wood, and should be hard, compact and rather brittle, to be good.

In wood there is generally from 24 to 26 per cent. of pure charcoal. On the average, a given weight of charcoal will give out more heat than the same weight of any other fuel, with the exception of two varieties of soft coal from South Wales. Next in order comes anthracite, which is the oldest of all kinds of fossil fuel. Its structure is perfectly homogeneous, or precisely the same throughout the mass; it breaks with a shell like fracture, has a jet black color, and a glassy lustre, on which is often seen a beautiful play of colors. Of this there is plenty in the world, only requiring to be raised. Pennsylvania alone has sufficient to supply us for an indefinite period; and in this country it is, practically, the best fuel that can be obtained. The average of American anthracite contains about 90 per cent of carbon, while that of France (of which, however, there is very little) contains 94 per cent. of the same.

After anthracite is coke, which is, so to speak, coal charcoal. When brown or soft coal is heated in close vessels or in heaps, to which very little or no air has access, the tar and gases are driven off, and coke remains. The gases are now generally collected, and with them we light our houses and streets, and the tar serves many a useful purpose.

Good coke should possess sufficient solidity to bear the weight of a smelting furnace without crushing, as smelting is one of its principal uses. It ought to be hard and coal like in form, and should have no soft, damp, black dust on its surface, and must not be exposed too long to the action of the atmosphere and weather, or it will soon perish and become valueless. It is sometimes made by the coal being carbonized in heaps, other times in brick mound shaped fireplaces, and the best is carbonized in ovens, while the worst varieties are those which come from the gas house, and have been carbonized in retorts. It should be almost pure carbon, having in addition only the mineral constituents or ashes of the coal from which it was made.

Brown, or soft coal, is well known by everybody; it breaks in layers, is shiny when broken, but quickly loses that appearance, blacks the fingers when touched, and contains a great quantity of tar; the various varieties contain from 60 to 90 per cent of carbon, and all give forth in burning a dense, black smoke, owing to its want of compactness and imperfect combustion. The great beds of soft coal are in Great Britain, of which a great quantity, nearly one quarter of her whole area, is coal.

Peat is semi fossilized vegetable matter, or rather woody fibre in a state of semi decay; it occurs in bogs, of which those of Ireland are notorious. It is cut in square blocks and dried, when it forms a good and pleasant fuel, and has a peculiar odor, that is considered agreeable by those who use it. A very good quality of charcoal can be made from it, that is of great value in certain smelting operations; and we are inclined to think that peat is destined to enjoy greater respect, as an object of economical use, than it yet has done.

Wood is the oldest used of all fuels, because the most easily attainable. Of wood, ash, fir, lime and elm are the best, and next to these come poplar, sycamore, beech and oak in point of economy. But in all cases, the choice of fuel must depend more on locality than on philosophical principles; and we have but given the result of much patient investigation and actual experiment.

EVENING BULLETIN.

MONDAY, NOVEMBER 30, 1857.

Pennsylvania Coal Trade.

Notwithstanding the embarrassments of the season, the paralyzation of business for three months, the difficulties of transportation companies, and the multiplied obstacles that the coal trade has had to contend with, there is little doubt that the whole amount of coal sent to market during the year 1857, from the Pennsylvania regions east of the Alleghany Mountains, will reach about seven millions of tons. Estimating this at the minimum valuation of two dollars per ton, at the mines, this State has received fourteen millions of dollars during the year for coal dug out of the soil east of the Alleghenies. From the bituminous region west of the mountains, it is probable that there will have been dug out about a million and a half tons, worth three millions of dollars. So Pennsylvania gets for her coal, during the panic year 1857, at least seventeen millions of dollars. If we were to take the price paid for it when it reaches market, we should have an aggregate of thirty-four millions of dollars. The California gold mines do not do better than this, and are really not so valuable as agents for furnishing the industry of the State with lucrative employment, and promoting the general welfare and the development of the State's resources.

[From the Scientific American.]

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SINGULAR HALLUCINATION.—The Cincinnati (Ohio) Enquirer says:—Mr. Francois Ange, a wealthy planter from Louisiana, arrived in this city yesterday, *en route* for Europe, where his friends are taking him for the purpose, if possible, of dispelling a singular hallucination, or species of insanity, with which he is afflicted. Two years ago he took it into his head that his pedal extremities were paralyzed, and, although assured by eminent medical practitioners that his understandings are as firm and strong as they ever were, he insists upon being carried about like a child, and not even an alarm of fire in his residence could induce him to hazard a perpendicular position. It is said that he is perfectly sane upon all other matters.

TRUE BENEVOLENCE.—The Delaware Republican says:—It is stated that Dr. Meggs, of Delaware county, Pa., met with Mr Samuel Riddle, a manufacturer, a few days ago when he asked Mr. R. how many families on his bank would suffer from want before they would make their condition known. The answer was "a large number." The Dr. told Mr. R to give them their living, and make out his bill, and he would fool the same in the spring. Mr. R. had the bell rung immediately, and set all hands to work on full time; the mill having been running half time for some weeks By this conduct many families have been placed in a comfortable situation for the coming winter.

REMARKABLE ESCAPE.—The ship Nebraska, from New York, went ashore on the coast of Texas, and was wrecked. Her only cargo was nine bales of hay. Mr. Thompson, second mate of the Nebraska, was drifted out to sea upon an oar, and was supposed to be lost, has turned up all right. After being ten hours in the water, he was drifted ashore without serious injury. There were six or eight passengers on the Nebraska from New York, including two ladies, all of whom were saved by the life boat from shore.

THE COTTON CROP.—The Concordia (La.) Intelligencer of the 13th instant says: "The great frost on Monday night, which was the first decisive frost of the season in our region, has entirely checked any further growth of cotton, but was by no means injurious to the ripened bolls. The frost, in checking the further growth of the plant, has also put a final stop to the progress of the rot, which was beginning to become prevalent. The deluging rain and high winds of Saturday night did far more damage to the cotton in this vicinity than the severe frost did."

SHOCKING ACCIDENT.—On the 20th instant, in Loudoun county, Va., as Dr. Nathan Janney, son of Daniel Janney, was riding in his buggy, he was thrown out and dragged a short distance, during which his head came in contact with a piece of the iron on the coupling pole, which entered one cheek, passed through his mouth and came out on the other side, breaking both jawbones and tearing out a portion of his tongue. He was otherwise seriously bruised and injured. His recovery is very doubtful.

EXTREME SENSIBILITY.—The Cincinnati (Ohio) Gazette says:—"A young lady from Kentucky, who was visiting near Columbus, Ohio, became much attached to a mocking bird in the house of her relatives. The bird sickened and died The lady bewailed the loss most piteously, and soon after became insane. On being sent home in charge of an attendant, she attempted suicide by stabbing herself with her scissors, but is now recovering."

TWO MEN DROWNED.—During the last trip of the steamer Oakland in the upper Mississippi, two men were drowned. While the boat was under way, between Burlington and Fort Madison, Iowa, a deck hand, in a state of semi unconsciousness, from sleep walked overboard and was drowned. Below Warsaw, Ill., two deck passengers engaged in a friendly tussle, fell overboard One was saved and the other was drowned. The names of the parties were not known.

A PLUNDERER SHOT.—A few days ago a large golden eagle was killed near Lewisourg, Va., while in the act of carrying off a fine turkey. A friend remarks, that being a "golden eagle," it must be worth fully ten dollars; but, we think, from its attack upon "turkey," it is a "Russian" eagle, which is *double*, and therefore worth twenty dollars.

HONORABLE APPOINTMENT.—A physician of Bedford county, Tennessee, has received the appointment of "Surgeon in the Nicaraguan army," from *General* William Walker. *General* Brigham Young will, no doubt, have a few similar appointments to make, which will be equally honorable and lucrative The difference between piracy and rebellion is not very great.

FOOD AND WATER SCARCE.—Advices to the 31st ult., from East Harbor, Turk's Island, say that "if vessels do not arrive soon with provisions, there will be a famine, as there is not more than two weeks' provisions on the island. There is but little water to be obtained. There is more salt now at this harbor than has been known for several seasons"

SPECIE PAYING BANKS.—The following Banks of South Carolina continue, it is said, to pay specie; Union Bank of Charleston; State Bank of South Carolina; Bank of Charleston; Commercial Bank of Columbia; Planters' Bank of Fairfield; Merchants' Bank of Cheraw; Bank of Chester; Bank of Camden, and Bank of Georgetown

THE ALLIGATOR'S ENEMY.—An alligator was recently killed near the Balize (mouth of the Mississipi) which was nearly eaten up by shrimps. It seems thas when one of these monsters is wounded ever so slightly, the shrimps at once begin to make their home in his body, and the colony increases until the little pests actually devour the alligator alive.

THE ERIE CANAL.—The Lockport (N. Y.) Courier says the canal has not frozen up yet, but it is so blocked up with snow, the tow path is so drifted and such a snow embargo is upon the boats the tow lines, the locks and everything else in this vicinity, that navigation is virtually suspended.

GIRLS FOR THE WEST.—The Cincinnati (Ohio) Gazette says:—"The great want in the West is of domestics. Send us girls who are willing to work in the kitchen—tidy, handy, willing girls, and we will find employment as fast as they come; but of the class of girls with trades, who want waiting on, we have quite enough in the West already."

TREMENDOUS DROUGHT.—Some idea of the great drought prevailing at Merced, California, may be formed from the following postscript to a letter received by the Mariposa Gazette: "Lager is very scarce, and the dust very deep. The inhabitants here use whiskey as a beverage—the water being used for agricultural purposes."

FATAL ACCIDENT.—On Friday afternoon, the floor of the sizing room in Claflin's paper factory, in Dayton, Ohio, gave way, precipitating the tubs, bleaching casks, and contents generally, to the floor below, and burying Lewis Schlager, a laborer, beneath the wreck. His body was soon extricated, but life was extinct.

MARCH OF LIBERALITY.—It is stated that the Shah of Persia is about to proclaim the equality of all his subjects, Mohammedans, Christians and Jews, all of whom, without distinction of race or religion, will be eligible for the civil and military offices of the State.

DROWNED.—The body of Captain McAuley, who lately disappeared from Oswego, N. Y. was found last Friday on the Lake shore. It was supposed that he was accidentally drowned, as $176 was found in his pockets. There were no marks of violence on the body.

DAMAGES.—Nicholas Masters has recovered a verdict of $3500 against the town of Warren, in ... county, Vt., in consequence of the ... of a bridge belonging to the